CITY OF MUSIC
UNESCO Declares Gwalior the 'City of Music'
The city of Gwalior in Madhya Pradesh has been added to UNESCO's Creative Cities Network (UCCN) for its strong commitment to harnessing culture and creativity.

+ FOREST CONSERVATION AMENDMENT ACT OF 2023
+ SOPHISTICATED ANALYTICAL & TECHNICAL HELP INSTITUTES (SATHI)
+ NASM-SR2023 NOBEL PRIZE FOR PEACE
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Eminent Personality

RANI LAKSHMIBAI

The Prime Minister, Shri Narendra Modi paid heartfelt tributes to the symbol of the bravery of Indian women power, Rani Lakshmibai on her birth anniversary.

Details

Rani Lakshmibai, also known as the Rani of Jhansi, was a prominent figure in the Indian Rebellion of 1857 against British colonial rule.

Her valiant efforts and unwavering courage have made her an enduring symbol of resistance and patriotism in India's struggle for independence.

Early Life and Background
Birth and Childhood:

Born as Manikarnika Tambe on November 19, 1828, in Varanasi, she later became known as Lakshmibai.

Daughter of Moropant Tambe and was raised in the culture of courage and valor.

Marriage to Maharaja of Jhansi:

Married Raja Gangadhar Rao Newalkar, the Maharaja of Jhansi, at a young age.

After their marriage, she was named Lakshmibai, and her son was named Damodar Rao.

Rani Lakshmibai's Role in the Rebellion of 1857

Resistance Against Annexation:

Following her husband's death in 1853, the British East India Company attempted to annex Jhansi under the Doctrine of Lapse.

Rani Lakshmibai fiercely opposed this annexation, refusing to cede control of Jhansi to the British.

Leadership in the Rebellion:

Amid the Indian Rebellion of 1857, Rani Lakshmibai took charge, leading her troops in the defense of Jhansi against the British.

Showcased remarkable bravery, military acumen, and determination in the face of adversity.

Battle of Jhansi:

Engaged in the Battle of Jhansi against British forces, exhibiting strategic prowess and a strong sense of leadership.

Although Jhansi ultimately fell to the British, her resistance became legendary.

Legacy and Contribution to India's Freedom Movement
Symbol of Courage and Patriotism:

Rani Lakshmibai's bravery and sacrifice made her an iconic figure in India's struggle for independence.

Her valor in fighting against colonial rule continues to inspire generations.

Iconic Battle Cry:
Her battle cry "Krantikari Rani" and "Jai Bhavani, Jai Shivaji" echoed the spirit of resistance against oppression.

Honors and Tributes:

Honored through numerous memorials, statues, and tributes across India, including the Rani Jhansi Marine National Park and Rani Jhansi Road in Delhi.

Death and Legacy
Death in Battle:
Rani Lakshmibai fought fiercely in the Battle of Gwalior in 1858 and died on June 18, 1858, while leading her troops.

Enduring Inspiration:
Her legacy of courage, determination, and sacrifice remains etched in Indian history and serves as an enduring inspiration for freedom fighters and nationalists.

BURNING ISSUES

About 40 workers are trapped inside a tunnel after the under-construction tunnel structure collapsed in Uttarakhand on November 12.
The tunnel is a part of the Char Dham all-weather road project which commenced in 2016.
This has prompted the authorities to launch a mega search and rescue operation.
It is a highway expansion project to widen 889 km of hill roads to provide all-weather connectivity in the Char Dham circuit.
The project, envisaged in 2016, covers Uttarakhand's four major shrines — Badrinath, Kedarnath, Gangotri and Yamunotri — in the upper Himalayas.
News Summary: Uttarakhand tunnel collapse Silkyara Tunnel Accident

About the tunnel
The total length of the tunnel, which is meant to connect Silkyara to Dandal gaon in Uttarkashi district, is 4.5 km.
The double-lane tunnel is pegged as one of the longest tunnels under the Char Dham all-weather road project and aims to reduce the journey from Uttarkashi to Yamunotri Dham by 26 kilometres.
From the Silkyara side, 2.3km of tunnel has been constructed, while 1.6km of tunneling work has been completed from the Barkot end. Approximately, a 400m stretch of the tunnel is yet to be constructed.

The accident
The workers are trapped in the Silkyara Tunnel located on the Uttarkashi-Yamnotri Road.
The collapse happened about 270m from the entrance of the Silkyara side.

The rescue operations
Agencies involved
The National Disaster Response Force (NDRF), the State Disaster Relief Force (SDRF) and the police are among the main figures in the multi-agency rescue operations.
As per the officials, the labourers are safe, and are being provided with food, water and oxygen.
The people trapped were contacted through walkie-talkies, through which it was learned that all of those trapped were unharmed.
As per their request, food was provided through a compression pipe. The distance to reach those trapped is approximately 60 meters.

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BURNING ISSUES

DEEPFAKES

- The Union Information Technology Minister recently said the government will form regulations to control the spread of deepfakes on social media platforms, terming them a "new threat to democracy."

About Deepfakes:

- Deepfakes are a compilation of artificial images and audio put together with machine-learning algorithms to spread misinformation and replace a real person's appearance, voice, or both with similar artificial likenesses or voices.
- The term "deepfake" combines the deep learning concept with something fake.
- It can create people who do not exist, and it can fake real people saying and doing things they did not say or do.

- Background: The origin of the word "deepfake" can be traced back to 2017, when a Reddit user with the username "deepfakes", posted explicit videos of celebrities.

Working:

- They are created by machine learning models, which use neural networks to manipulate images and videos.
- To make a deepfake video of someone, a creator would first train a neural network on many hours of real video footage of the person to give it a realistic "understanding" of what he or she looks like from many angles and under different lighting.
- Then they'd combine the trained network with computer-graphics techniques to superimpose a copy of the person onto a different actor.
- Deepfake technology is now being used for nefarious purposes like scams and hoaxes, celebrity pornography, election manipulation, social engineering, automated disinformation attacks, identity theft, and financial fraud.
- Deep fakes differ from other forms of false information by being very difficult to identify as false.
- AI is the ability of a computer, or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.
- Although there is no AI that can perform the wide variety of tasks an ordinary human can do, some AI can match humans in specific tasks.
- Characteristics & Components: The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal. A subset of AI is Machine Learning (ML).
- Deep Learning (DL) techniques enable this automatic learning through the absorption of huge amounts of unstructured data such as text, images, or video.

POLITY AND GOVERNANCE

PROTECTION OF WOMEN FROM DOMESTIC VIOLENCE ACT, 2005 (DV ACT)

- The Supreme Court recently agreed to examine whether a transgender woman can claim maintenance under the Protection of Women from Domestic Violence Act, 2005 (DV Act).

About Protection of Women from Domestic Violence Act 2005 (DV Act):

- The DV Act was enacted by Parliament on September 13, 2005, and extends to the whole of India.
- It is basically meant to provide protection to a wife or female live-in partner from violence at the hands of the husband, a male live-in-partner, or his relatives.
- Domestic violence under the Act includes actual abuse or the threat of abuse, whether physical, sexual, verbal, emotional, or economic.
- Harassment by way of dowry demands is also covered under the definition of domestic violence.

Who is covered under the Act?

- The Act covers all women who may be mother, sister, wife, widow, or partners living in a shared household.
- The relationship may be in the nature of marriage or adoption.
- In addition, relationships with family members living together as a joint family are also included.
- Who can file a complaint?
- Any woman who alleges to have been subjected to any act of domestic violence by the offender or any person may file a complaint on her behalf.
- A child is also entitled to relief under the DV Act. The mother of such a child can make an application on behalf of her minor child (whether male or female).
- In cases where the mother makes an application to the court for herself, the children can also be added as co-applicants.
- However, no female relative of the husband or the male partner can file a complaint against the wife or the female partner.

- Against whom can a complaint be filed?
- Any adult male member who has been in a domestic relationship with the woman.

Protection Officers:

- Under the DV Act, Protection Officers have been appointed by the Government to help the aggrieved woman in filing the case.
- They are to be attached to the Magistrates of the courts for the area notified for each protection officer.
- The Protection Officer facilitates the women to approach the court by providing legal aid and get appropriate relief from the courts
- Further, they execute the orders of the Court wherever necessary with the help of the police.
- Options are also available to the aggrieved person to file the petition before the Judicial Magistrate Court, or with the service provider, or at a nearby police station.

Service Providers:

- Under the DV Act, Service Providers are members of notified Non Governmental Organizations.
- They co-ordinate with all the stakeholders to get justice and relief for the victims of domestic violence.
- They help the aggrieved women in filing the Domestic Incident Report, provide accommodation in the short-stay homes along with their children, counsel them, and help the aggrieved get medical treatment if necessary.
- They also impart them with vocational training to help them secure employment and sustainable income.

GOVERNMENT SCHEMES AND BILLS

AGNI' INITIATIVE TO PROMOTE INNOVATIONS BY AYURVEDA PRACTITIONERS

- AGNI – 'Ayurveda Gyan Naipunya Initiative' - A CCRAS, (Ministry of Ayush) Initiative.

- CCRAS will document and publish the reported medical practices and therapeutic regimens for education and academic purposes in consultation with NCISM (National Commission for Indian System of Medicine).

- AGNI aims to provide a platform to Ayurveda practitioners for reporting their innovative practices & and experiences in various disease conditions.

- To promote the culture of reporting evidence-based practice among Ayurveda Practitioners.

- To document the reported successful therapeutic regimens for various disease conditions involving Single drug/ Formulation/ Procedures for the purpose of education and academics.

- To identify the interested Ayurveda practitioners for collaboration in the creation of a database through applications and capacity building through training in research methods and good clinical practices.

- To undertake research for mainstreaming pragmatic practices through scientific validation and evidence-based appraisal

- Central Council for Research in Ayurveda Sciences (CCRAS), Ministry of Ayush, in its new endeavour to promote research for mainstreaming the pragmatic Ayurveda practices through scientific validation and evidence-based appraisal, has launched "Ayurveda Gyan Naipunya Initiative"

(AGNI) for physicians practicing in the field of Ayurveda. The interested qualified Ayurveda Practitioners may send the Expression of Interest in the format available on CCRAS Website http://ccras.nic.in

- To provide a platform for Ayurveda practitioners to report their innovative practices & and experiences in various disease conditions along with promoting the culture of evidence-based practice among Ayurveda Practitioners. The initiative also aims to undertake research for mainstreaming pragmatic practices through scientific validation and evidence-based appraisal.

- CCRAS will document and publish the reported medical practices and therapeutic regimens for education and academic purposes in consultation with NCISM. Further research studies may be taken up by CCRAS on the reported medical practices for mainstreaming and scientific validation by developing research proposals in collaboration with Ayurveda Practitioners and other relevant institutes/ organizations.

- There are over 500,000 registered Ayurveda practitioners who are mainly practicing in India. CCRAS, under the Ministry of Ayush is an apex research organization committed to undertaking, coordinating, formulating, development and promotion of research on scientific lines in Ayurveda. In the recent past, to boost scientific research through Ayurveda colleges and hospitals, CCRAS has initiated the Studentship Program for Ayurveda Research Ken (SPARK) for Undergraduate Scholars, Scheme for Training in Ayurveda Research for PG Scholars (PG-STAR) for PG Scholars and Scope for Mainstreaming Ayurveda Research in Teaching Professionals (SMART) program for teachers.

FOREST CONSERVATION AMENDMENT ACT OF 2023

- The Forest Conservation Amendment Act of 2023 has received limited attention and little discussion about its impact on forests and its inhabitants. From the colonial forest law in 1865 to the Forest Conservation Amendment Act, 2023, more than fifteen laws, Acts, and policies have been formulated interlinking forests with legal and policy frameworks.

- However, there is little to no recognition of the rights of indigenous communities in these Acts, who are the rightful inhabitants of forest lands.

What is the new amendment?

- At first glance, the amendment primarily aims to tackle the critical issues of climate change and deforestation's adverse effects, focusing on effective management and afforestation. The law further aims to determine how forests can be utilised for economic gain, and the manner in which it seeks to achieve this goal is outlined in the legislation.

- The primary method used to achieve this objective involves removing forests from the law's jurisdiction, thereby facilitating various forms of economic exploitation. As per the amendment, the forest law will now apply exclusively to areas categorised under the 1927 Forest Act and those designated as such on or after October 25, 1980.

- The Act will not be applicable to forests that were converted for non-forest use on or after December 12, 1996 and land which falls under 100 kilometres from the China and Pakistan border where the central government can build linear projects. To establish security infrastructure and facilities for surveillance, the central government is authorised to construct security measures in areas up to ten hectares.

- This provision also applies to areas (up to five hectares) which are designated as vulnerable. Within these regions, the government, with the necessary approvals, can implement security protocols as described above.

- Initiatives like ecotourism, safari, environmental entertainment, and more may be implemented in these areas. The main objective of these initiatives is to improve the livelihoods of those reliant on forest resources, a goal that has drawn criticism from tribal communities and human rights activists.

Why was the amendment brought in?

- The Godavarman Thirumulpad case, a prominent legal dispute that came before the Supreme Court in 1996, led to an interpretation of forest land in accordance with its 'dictionary meaning'. Subsequently, all private forests were brought under the ambit of the 1980 law. This has been a subject of debate as it was argued that the legislation primarily aims to restrict forest land from being used for various non-forest purposes, including the conversion of land for large-scale industries.

- The law has faced significant opposition, especially from private landowners, individuals, and organisations involved in forest conservation, for its perceived adverse impact on the country's industrial progress.

- In other words, the need to exclude forest land from the legal framework was mainly driven by the requirements of the industrial classes in the country. It is in this context that concerns regarding the Forest Conservation Act tend to resurface periodically, echoing the apprehensions of indigenous communities and human rights activists. These factors came to the forefront again when the Forest (Conservation) Amendment Bill was introduced in Parliament in March, triggering extensive discussions and debates. The Parliament then referred the Bill to a 31-member Joint Parliamentary Committee (JPC).

What did the JPC recommend?

- Of the 31-member JPC addressing the issue, only six individuals were from the opposition. The JPC submitted its report to Parliament on July 20, within three months. The critical comments from the committee members and public appear to have been largely disregarded; reduced to dissenting notes, holding a minority viewpoint on the Bill.

- Therefore, the Bill successfully passed in both houses of Parliament without any substantial debates or discussions. There have been no collaborative discussions with the southern States concerning matters related to their specific geographical locations.

- A few days after the Act was enacted, the Odisha government revoked the "deemed forest" status in the State but had to later cancel the order due to public outrage and cited that it is waiting for detailed rules and guidelines from the concerned Central

Ministry. If the government were to remove the forests from the purview of the Forest Conservation Act, it would effectively obstruct indigenous communities from asserting their rights.

What happened to the stipulation of 'prior consent'?

- The Forest Conservation Act underwent important amendments in 2016 and 2017, which stipulated that prior consent from the tribal grama sabha was mandatory for any alterations to forests for non-forest purposes. However, the recent revisions to the legislation have removed the necessity for such consent.

- Nevertheless, in this situation, State govern-ments can proactively engage in specific activities within this framework through the inclusion of grama sabhas, particularly in matters of land acquisition for various purposes, by establishing State-level steering committees.

- But numerous State governments might hesitate on this aspect, as they hold a preconceived notion that Adivasi grama sabhas are 'anti-development,' and they fear that their decisions could hinder economically lucrative afforestation initiatives.

What is compensatory afforestation?

- Compensatory afforestation, as outlined in the new legislation, encompasses various projects and schemes that can be undertaken by both private individuals and organisations (including large corporations) for afforestation or reforestation purposes.

- The Compensatory Afforestation Act encountered significant challenges in the past, primarily due to ambiguities in the original legislation and shortage of available land.

- The goal of the new amendment is to stream-line the process. However, there is apprehension regarding the potential environmental implications of this amendment.

- The law mandates that for every parcel of land that is lost due to afforestation efforts, an equivalent amount of land must be afforested elsewhere. It does not specify the type of trees that should be planted, leaving room for discretion.

How does this affect the Forest Rights Act (FRA)?

- The FRA has had notable impacts in various regions, such as the Mendha- Lekha in Maharashtra, Loyendi in Odisha, and Malakkappara in Kerala.

- Despite the initial enthusiasm, it appears that both the Central and State governments have become less enthusiastic about implementing the FRA in their States. Many consider the Act as an impediment to convert forest land for non-forest purposes.

- The State government and its bureaucracy hold the view that granting community rights under the FRA could weaken the State's authority over the forest. They anticipate potential legal challenges to any such endeavours.

- To navigate this situation, the government has opted to reduce or dilute the extent of forest areas, rather than amend the FRA, thereby limiting the potential for additional Adivasi claims.

- The amendment also fails to address the growing issue of human-animal conflicts in forest areas, particularly in the Adivasi hamlets of the Western Ghats region. This conflict not only endangers the livelihoods of the Adivasis but also poses a threat to wildlife.

What are the problems?

- When examined superficially, the law appears to address issues without compli-cations. However, once the law is put into practice, it presents substantial challenges to forest dwelling communities and government agencies. The concept of afforestation, which offers considerable financial incentives to private individuals and institutions for afforestation projects, fundamentally clashes with the idea of forest governance.

- Furthermore, it contradicts the concept of decentralised forest governance as forests in the country fall under the concurrent list. Such governance practices are against the spirit of federal norms.

- Moreover, defining strategic linear projects becomes exceptionally complex and vague. Unlike external security threats like border disputes and cross-border skirmishes, internal environmental security should also be considered a significant concern, especially in States that consistently face natural disasters. Regrettably, this priority is not guaranteed.

PRADHAN MANTRI-PARTICULARLY VULNERABLE TRIBAL GROUPS (PM-PVTG) DEVELOPMENT MISSION

- The Prime Minister will launch the PM-PVTG Development Mission in a bid to empower the tribals on the birth anniversary of Birsa Munda, which has been celebrated as Janja-tiya Gaurav Diwas.

Discussion: Particularly Vulnerable Tribal Groups (PVTGs) Development Mission.
SPOTLIGHT
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Who are Particularly Vulnerable Tribal Groups (PVTGs)?

- PVTGs are a more vulnerable group among tribal groups in India.These groups have primitive traits, geographical isolation, low literacy, zero to negative population growth rate and backwardness.

- Moreover, they are largely dependent on hunting for food and a pre-agriculture level of technology. In 1973, the Dhebar Commission set up a separate category for Primitive Tribal Groups (PTGs). In 1975, the Centre identified 52 tribal groups as PTGs. In 1993, 23 more groups were added to the list. Later, in 2006, these groups were named PVTGs.

- Currently, there are 2.8 million PVTGs belonging to 75 tribes across 22,544 villages in 220 districts across 18 states and Union Territories in India.

- According to the 2011 Census, Odisha has the largest population of PVTGs at 866,000. It is followed by Madhya Pradesh at 609,000 and Andhra Pradesh (including Telangana) at 539,000. The largest PVTG is Odisha's Saura community, numbering 535,000.

About PM-PVTG Development Mission:

- The Rs 24,000-crore project is aimed at the development of the PVTGs. It has been designed to bring critical infrastructure like power, water, road connectivity, housing, education, and healthcare to the PVTG communities living in remote villages.

- Under the scheme, about 11 interventions like the PM-Gram Sadak Yojana, PM-Gram Awaas Yojana, Jal Jeevan Mission, and others will be taken to these target villages through the coordinated work of nine ministries.

- In addition, saturation will be ensured for schemes such as the Pradhan Mantri Jan Arogya Yojna, Sickle Cell Disease Elimination, TB Elimination, 100 percent immunisation, PM Surakshit Matritva Yojana, PM Matru Vandana Yojana, PM Poshan, and PM Jan Dhan Yojana.

SOPHISTICATED ANALYTICAL & TECHNICAL HELP INSTITUTES (SATHI)

- The Centre's move to cancel a call for pro-posals under the Department of Science and Technology (DST)'s SATHI programme has sparked fears among higher education insti-tutions

About Sophisticated Analytical & Technical Help Institutes (SATHI):

- It is an initiative by the Department of Science and Technology to boost access to research and testing facilities and address problems of accessibility, maintenance, redundancy, and duplication of expensive equipment in Institutions.

- It aims to set up a shared, professionally managed Science and Technology (S&T) infrastructure facility which can be readily accessible to academia, start-ups, manufacturing units, industries, and R&D labs.

- Such S&T infrastructure will be known as the Sophisticated Analytical & Technical Help Institute (SATHI).

- These Centres will be equipped with major analytical instruments and advanced manufacturing facilities which are usually not available at Institutes / Organisations.
- It would encourage and ensure the establishment of a National Network of Laboratories and testing facilities tightly linked to global standards.
- SATHI facilities will be used for 80% of their available time by external users, e. outside of the host institutes and the remaining 20% of their available time by internal users of the host institute.
- The usage of the facility will be guided by the basic principle of maximum and effective utilization and accessibility for all.
- The facilities provided by the SATHI may be utilized by any user or organization upon payment of nominal charges.

Funding:

- Proposals from well-established, internationally competitive S&T host institutes / R&D Centres / Organizations irrespective of their status as Government / Non Government, from State/ Central Universities, are invited through networking and a cluster approach.
- The upper limit of funding support from DST would be Rs 60.0 crore for 4 years for acquiring only state-of-the-art national facilities.
- A not-for-profit Section-8 company as well as a Governing Body (GB) formation are compulsory in consortium mode with the support of the granting agency.
- Duration: The duration of support for the SATHI Project will be for a period not exceeding 4 years.

STATES APPROACH SC AGAINST THEIR GOVERNORS

- Several states accuse Governors of unreasonably withholding crucial Bills, leading to a constitutional crisis that affects areas including public health, higher education, Lokayukta (anti-corruption ombudsman), and cooperative societies.
- Several states express concerns over Governors' perceived reluctance to approve crucial Bills, leading to a delay in implementing laws vital for public welfare, including those related to public health, higher education, Lokayukta, and cooperative societies.
- The delay in passing Bills raises fears of a constitutional crisis, as essential areas like public health and anti-corruption measures remain inadequately addressed, potentially impacting citizens' well-being and governance integrity.
- Urgent action is required to resolve the deadlock, emphasizing the necessity for Governors and state authorities to collaborate efficiently, ensuring the timely passage of these Bills to uphold democratic principles and meet the pressing needs of the public.

Constitutional Provisions

- Article 200 of the Indian Constitution outlines the Governor's options when presented with a Bill passed by the state legislature. The Governor can:
- Approve the Bill, allowing it to become law.
- Refrain from approving the Bill, except in the case of Money Bills.
- If the Bill affects the power of judicial review of the High Court, the Governor can send it for the President's consideration.
- If the Governor withholds assent, they must return the Bill to the Legislative Assembly, advising reconsideration. The Governor acts based on the advice of the Council of Ministers.
- The Constitution states Bills should be returned "as soon as possible," but it does not specify a timeframe.

Legal Interpretation

- The Supreme Court interpreted "as soon as possible" to mean "as early as practicable without avoidable delay" in a 1972 judgment.
- In a 2020 case, it was suggested that a 'reasonable time' for the process would be three months, although this is not an explicit constitutional provision.

Demands and Legal Challenges

- States are demanding a clear time limit for Governors to assent or return Bills to avoid indefinite delays.
- Some states, like Kerala, have urged the Supreme Court to review previous judgements that did not specify a time limit for Governors to decide on Bills.

RAPID INNOVATION AND STARTUP EXPANSION (RISE)

- Recently, AIM, NITI Aayog launched a new accelerator called Rapid Innovation and Startup Expansion (RISE) to support Australian and Indian circular economy startups.

About Rapid Innovation and Startup Expansion (RISE):

- The India Australia RISE Accelerator is delivered in partnership between CSIRO, Australia's national science agency, and Atal Innovation Mission (AIM), the Government of India's flagship initiative to promote a culture of innovation and entrepreneurship.

- This initiative focuses on startups and small to mid-sized enterprises (SMEs) in India and Australia working on circular economy technologies and solutions.

- Focus Themes: With a focus on Environment and Climate Technology, the program will be tailored to accelerate start-ups working on a range of areas:

- Climate Smart Agriculture

- Clean Energy

Circular Economy and Waste Management

- Climate Smart Mobility

- Over the nine months, the RISE Accelerator program will help startups navigate early steps in a new region, fast-track connections to the right partners, customers, and talent, and build credibility to succeed in international markets.

- The accelerator, in its first round, will focus on supporting startups and SMEs working on technologies and solutions for the waste and circular economy

- Participating startups may also be eligible for up to INR 40,00,000 in non-equity grants.

- The future rounds of the accelerator will focus on climate-smart agriculture, clean energy and climate smart mobility.

What is the circular economy?

- A circular economy means products are designed in such a way that they can be used again, or even multiple times, to maximise their value

INDIAN ECONOMY

FINANCE COMMISSION

- The government has started the process of constitution of the Sixteenth Finance Commission.The government has started the process of constitution of the Sixteenth Finance Commission.

- It is a constitutional body for giving recommendations on the distribution of tax revenues between the Union and the States and amongst the States.

Finance Commission of India

- **The Finance Commission is constituted by the President under Article 280 of the Constitution.**

- It is constituted at the end of every fifth year or earlier, as deemed necessary by the President.

- Parliament may, by law, determine the requisite qualifications for appointment as members of the Commission and the procedure for their selection. On account of this, The Finance Commission (Miscellaneous Provisions) Act, 1951, was passed.

- Mandate: It is the duty of the Commission to make recommendations to the President as to:

- The distribution between the Union and the States of the net proceeds of taxes which are to be, or may be, divided between them and the allocation between the States of the respective shares of such proceeds;

- The principles which should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India;

- The measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats and Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State;

- Any other matter referred to the Commission by the President in the interests of sound finance.

Composition:

- It consists of a Chairman and four other members appointed by the President.

Qualifications of members:

- The Chairman of the Commissionis selected from among persons who have had experience in public affairs, and the four other members are selected from among persons who

- Are, or have been, or are qualified to be appointed as judges of a High Court; or

- Have special knowledge of the finances and accounts of Government; or

- Have had wide experience in financial matters and in administration; or

- Have special knowledge of economics

Tenure of members:

- Every member will be in office for the time period as specified in the order of the President and is eligible for reappointment.

- The recommendations of the Finance Commission are not binding on the government.

INSOLVENCY AND BANKRUPTCY CODE, 2016

- The Supreme Court recently upheld key provisions of the Insolvency and Bankruptcy Code, 2016 (IBC), which had been challenged on various grounds, including the alleged absence of due process and a violation of natural justice principles.

About Insolvency and Bankruptcy Code, 2016:

ORDINANCE TO AMEND
INSOLVENCY AND BANKRUPTCY CODE, 2016

DECISIONS | BENEFITS
- Special Dispensation to MSMEs in the Insolvency Process → Faster Turnaround and Ease of Doing Business
- Treating Home Owners as Financial Creditors → Easier to Recover Investments
- Change in Voting Structure → Promoting Resolution over Liquidation
- Change in Eligibility for Bidding → Improved Recovery from Non Performing Assets (NPAs)

- It is the bankruptcy law of India which seeks to consolidate the existing framework by creating a single law for insolvency and bankruptcy.

- It provides for a time-bound process to resolve insolvency.

- Applicability: The provisions of the Code are applicable to companies, limited liability entities, firms, and individuals (i.e. all entities other than financial service providers).

Timeframe for completion of the exercise:

- Companies have to complete the entire insolvency exercise within 180 days under the IBC. The deadline may be extended if the creditors do not raise objections to the extension.

- For smaller companies, including startups with an annual turnover of Rs 1 crore, the whole exercise of insolvency must be completed in 90 days, and the deadline can be extended by 45 days.

- If debt resolution doesn't happen, the company goes for liquidation.

Who regulates the IBC proceedings?

- The Insolvency and Bankruptcy Board of India (IBBI) has been appointed as a regulator and it can oversee these proceedings.

- IBBI has 10 members appointed by the Central Government.

- IBBI regulates insolvency professionals, insolvency professional agencies, and information utilities set up under the Code.

Who facilitates the insolvency resolution?

- A licensed professional administer the resolution process, manages the assets of the debtor, and provides information for creditors to assist them in decision-making.

Who adjudicates over the proceedings?

- The proceedings of the resolution process will be adjudicated by the National Companies Law Tribunal (NCLT) for companies and the Debt Recovery Tribunal for individuals.

- The courts approve initiating the resolution process, appointing the insolvency professional, and giving nod to the final decision of creditors.

What is the procedure to resolve insolvency under the Code?

- When a default occurs, the resolution process may be initiated by the debtor or creditor.

- The insolvency professional administers the process.

- The professional provides financial information

of the debtor from the information utilities to the creditor and manages the debtor's assets.

- This process lasts for 180 days, and any legal action against the debtor is prohibited during this period.

What does the committee of creditors do?

- A committee consisting of the financial creditors who lent money to the debtor is formed by the insolvency professional.
- The creditors' committee decides the future of the outstanding debt owed to them.
- They may choose to revive the debt owed to them by changing the repayment schedule or selling the assets of the debtor to get their dues back.
- If a decision is not taken in 180 days, the debtor's assets go into liquidation.

What happens under liquidation?

- If the debtor goes into liquidation, an insolvency professional administers the liquidation process.
- Proceeds from the sale of the debtor's assets are distributed in the following order: First, insolvency resolution costs, including the remuneration to the insolvency profession-al; second, secured creditors, whose loans are backed by collateral; and third, dues to workers, other employees; forth, unsecured creditors.

CREDIT GUARANTEE TRUST FOR MICRO AND SMALL ENTERPRISES (CGTMSE) SCHEME

- The Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) Scheme has approved a credit guarantee of Rs. 1 lakh crore in just 7 months of the current financial year 2023-24.
- About the Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) Scheme:
- It was launched in 2000.
- Funding: The corpus of CGTMSE is being contributed by the Government of India and the Small Industries Development Bank of India (SIDBI) in the ratio of 4:1.
- Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) is jointly set up by the Ministry of Micro, Small, & Medium Enterprises (MSME), the Government of India, and the Small Industries Development Bank of India (SIDBI) to catalyse the flow of institutional credit to Micro & Small Enterprises (MSEs).

- CGTMSE has been instrumental in providing guarantee cover to collateral and/or third-party guarantee-free credit facilities extended by eligible Member Lending Institutions [MLIs] to MSEs.

Key points about the Small Industries Development Bank of India

- It was established under an Act of Parliament in 1990.
- It is the Principal Financial Institution engaged in the promotion, financing & development of the Micro, Small and Medium Enterprises (MSMEs) sector and the co-ordination of the functions of the various institutions engaged in similar activities.
- The main objective of SIDBI is to offer loans (both direct and indirect) to MSMEs to help address the development and financial gaps in the ecosystem of MSMEs.
- SIDBI helps MSMEs acquire the funds they require to grow, market, develop, and commercialise their technologies and innovative products.
- It was made responsible for administering the Small Industries Development Fund and National Equity Fund.

INVESTOR RISK REDUCTION ACCESS PLATFORM

- The Securities and Exchange Board of India (SEBI) has launched the Investor Risk Reduction Access (IRRA) platform at the Bombay Stock Exchange (BSE).
- IRRA is a platform that will act as a 'safety net' for investors in case of technical glitches faced by a trading member or a stock broker registered with SEBI.

About

- IRRA platform has been developed to reduce risks faced by investors in the eventuality of technical glitches at the trading member's end at both the primary site and disaster recovery site.
- It will provide investors an opportunity to close open positions and cancel pending orders in case of disruption at the stock brokers' end.
- An open position is a trade which is still able

to generate a profit or incur a loss.

- In other words, IRRA platform can be used in case of technical glitches or unforeseen outages that render the trading member's site inaccessible.

- The IRRA platform has been designed to reduce risks for investors participating in the market.

- It is not meant for taking fresh positions or orders, but only to cancel the pending orders.

Developed by

- IRRA has been jointly developed by all the stock exchanges – BSE, NSE, NCDEX, MCX and Metropolitan Stock Exchange of India (MSE).

- Timeline for a trading member to request migration to the IRRA platform

- Before requesting stock exchanges to migrate to the IRRA platform, trading members are required to put efforts into restoring the primary and DR sites.

- A trading member can let the stock exchange know through email if they want to switch to the IRRA platform.

- They can do this either before the market session begins or after it starts.

- However, it has to be at least 2.5 hours before the scheduled end of the market hours for the segment where they have an open position.

- Reverse migration of a trading member from the IRRA platform

- Based on the trading member's request and confirmation from all exchanges, the IRRA system services will be shut down to enable the trading member to resume business from the original trading system.

- Only one reverse migration will be allowed during a trading day.

- The request for reverse migration needs to be submitted at least 1 hour before the scheduled closure of the market in which the trading member holds an open position.

Need for such platform

- With increasing dependence on technology in the securities market, there has been a rise in instances of glitches in trading members' systems.

- These instances often lead to disruption of trading services and investor complaints.

- In such scenarios, investors with open positions are at risk of non-availability of avenues to close their positions, particularly if markets are volatile.

- SEBI had announced in December 2022 that: if trading members face challenges like being unable to move to the Disaster Recovery site within stipulated time during a crisis or dealing with cyber-attacks, stock exchanges will offer a backup service to handle such disruptions.

Functioning of IRRA platform

- Trading members can use IRRA when they encounter technical issues at their end that affect their ability to service clients across exchanges from both – the primary site and disaster recovery site.

- Stock exchanges can also independently activate the IRRA service by monitoring factors like connectivity, order flow, and social media posts.

- They can do this even without a specific request from a trading member if it is deemed necessary.

- This service shall be enabled by the exchanges, suo moto, only in case of disruption of trading services of trading member across all the exchanges.

How will the platform help investors?

- Once the investors are authorized to access of the IRRA platform, investors can:

- view and cancel pending orders across all segments and all stock exchanges from the order book,

- square off/close the open positions across segments and exchanges

COMMODITY MARKETS OUTLOOK

- The escalating conflict in the Middle East presents the risk of a simultaneous energy shock affecting oil and commodity markets, potentially leading to increased prices and food insecurity.

- The World Bank's latest Commodity Markets Outlook warns that an escalation of the conflict in the Middle East, combined with disruptions from the Russian invasion of Ukraine, could push global commodity markets into uncharted waters despite the global economy being more resilient than in the 1970s.

Highlights of the World Bank's Commodity Markets Outlook

- The report provides a comprehensive analysis of the potential near-term implications of the ongoing conflict on global commodity markets.
- Limited Impact So Far
- The conflict has had limited effects on commodity markets, with only modest increases in oil prices and minimal changes in prices of agricultural commodities and metals.

Baseline Forecast

- Under the baseline forecast, assuming the conflict doesn't escalate, oil prices are expected to average $90 a barrel in the current quarter and decline to an average of $81 a barrel next year.
- Overall commodity prices are projected to fall by 4.1% next year due to rising supplies of agricultural commodities.

Potential Escalation Scenarios

- Small Disruption: If there's a small disruption in global oil supply (comparable to the Libyan civil war in 2011), oil prices could increase by 3% to 13% initially, reaching a range of $93 to $102 a barrel.
- Medium Disruption: A medium disruption (similar to the Iraq war in 2003) could lead to a 21% to 35% increase in oil prices, reaching between $109 and $121 a barrel.
- Large Disruption: In a large disruption scenario (similar to the Arab oil embargo in 1973), oil prices could spike by 56% to 75%, reaching between $140 and $157 a barrel.

Dual Energy Shock

- If the conflict escalates, the global economy will face a dual energy shock, both from the war in Ukraine and the Middle East. This could lead to higher oil prices, subsequently increasing food prices and intensifying food insecurity globally.

ENVIRONMENT AND ECOLOGY

RIGHT TO A HEALTHY ENVIRONMENT

- Canberra could become the first place in Australia to give people a legal right to a healthy environment.

Details

- The Human Rights (Healthy Environment) Amendment Bill 2023 was introduced in the ACT Legislative Assembly.
- It seeks to address the impacts of climate change and shore up the environment for future generations.
- It said a healthy environment included "clean air, a safe climate, access to safe water and to healthy and sustainably produced food …. [with] healthy biodiversity and ecosystems".
- The Australian government said the law would require ACT authorities to consider the environment when making decisions or carrying out functions.
- But any breaches of the yet-to-be-passed law will not attract penalties for some time.

Significance

- The United Nations (UN) General Assembly last year agreed that access to a clean and healthy environment was a universal human right.
- The bill was in step with overseas efforts to preserve healthy environments.
- The legislation reflects growing international consensus and practice around the role and importance of environmental protections.
- The resolution was in part designed to help member states be able to advance climate policies domestically.

Right to a Healthy Environment

- The right to a healthy environment or the right to a sustainable and healthy environment is a human right advocated by human rights organizations and environmental organizations to protect the ecological systems that provide human health.
- The right was acknowledged by the United Nations Human Rights Council during its 48th session in October 2021 and subsequently by the United Nations General Assembly on July 28, 2022.
- The right is interconnected with other

- health-focused human rights, such as the right to water and sanitation, right to food and the right to health.
- The right creates an obligation of the state to regulate and enforce environmental laws, control pollution, and otherwise provide justice and protection for communities harmed by environmental problems.
- The right to a healthy environment has been an important right for creating environmental legal precedents for climate change mitigation and other environmental issues.

Inspiration

- The right to a healthy environment has developed gradually since the 1970s when it was first alluded to by the 1972 Stockholm Declaration.
- Its first Principle states: "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being".
- The Stockholm Declaration was a catalyst for the recognition of the right to a healthy environment at the national and regional levels.
- At the national level, Portugal was the first country to enshrine this right in its constitution, in 1976.
- Since then, the right to a healthy environment has rapidly spread to other constitutions, in a fashion unseen for any other "new" human right.
- And now, Canberra could become the first place in Australia to give people a legal right to a healthy environment.

GUJARAT GETS A STATE FISH

- Ghol fish

- It is a rare and expensive marine species.
- From iodine, omega-3, DHA, EPA, iron, taurine, magnesium, fluoride, to selenium, it is loaded with rich nutrients.
- The fish is usually found in the Indo-Pacific region that stretches from the Persian Gulf to the Pacific Ocean.
- Length
- The length of the Ghol fish is around one-and-a-half meters. The longer the Ghol fish, the higher its price.
- The price of the Ghol fish per unit length can go up to Rs 5 lakh.
- **In India**
- Ghol fish is one of the largest fish found in India. It is found in the marine areas of Gujarat and Maharashtra in a golden-brown colour.
- Called as 'Sea Gold'
- What makes this fish to be called as 'Sea Gold' is a pouch in its stomach, which has potent medicinal properties and has a high valuation in the overseas market.

Benefits of Ghol fish

- Good for eye health: This fish contains many vitamins, minerals, proteins, which helps in maintaining eyesight.
- Prevent ageing and wrinkles: The collagen content in the ghol fish prevents wrinkles and also keeps the elasticity of the skin intact.
- Improves IQ of infants: Omega-3 content in it improves IQ of infants if fed on a regular basis – it stimulates the growth of brain cells.
- Toning muscles

Economic value

- The fish is in demand because of its meat and air bladder (sold separately.).
- Ghol fish is used to make beer and wine and its air bladder is used in pharmaceuticals.
- News Summary: Gujarat gets a state fish

GLOBAL DECLARATION FOR RIVER DOLPHINS

- In a ground-breaking development, 11 Asian and South American countries
- recently signed a global declaration, the "Global Declaration for River
- Dolphins," aimed at preserving the world's six remaining river dolphin species.
- This declaration is designed to guide 14

nations where river dolphins inhabit, with a focus on responsible freshwater dolphin conservation.

- It aims to halt the decline of all river dolphin species and increase the most vulnerable populations.
- The declaration will escalate collaborative endeavours to safeguard the surviving river dolphin species.
- Countries that adopted the declaration include Bangladesh, Bolivia, Brazil, Cambodia, Colombia, Ecuador, India, Nepal, Pakistan, Peru, and Venezuela.
- The countries involved agreed to improve water quality in the dolphins' habitat, create protected areas, tackle overfishing, and involve Indigenous communities in the affected regions in protecting the animals.

Key facts about river dolphins:

- River dolphins are any of six species of small, usually freshwater aquatic mammals that are related to whales (Order Cetacea).
- A seventh river dolphin species, the Chinese river dolphin, or baiji, was declared extinct in 2007.

Distribution:

- These dolphins are found in rivers of south-central Asia, China, and South
- America and in the coastal waters of Brazil, Argentina, and Uruguay.

Common Features:

- They have slender beaks lined with lots of teeth, small eyes, flexible necks and
- bodies, pronounced forehead melons, large flippers, and small dorsal fins.
- The six surviving species of river dolphins are the Amazon, Indus, Ganges,
- Irrawaddy, Tucuxi, and Yangtze finless porpoises.
- All six species of river dolphins are classified as Endangered or Critically
- Endangered on the IUCN Red List of Threatened Species.
- The largest is the Amazon River dolphin (Inia geoffrensis).
- They are important indicators of the health of rivers. Where freshwater dolphin populations are thriving, it is likely that the overall river systems are flourishing.

ALYCAEUS HIMALAYAE

- A new snail species named Alycaeus himalayae was recently discovered from a cave in Arunachal Pradesh.

- It is a new snail species belonging to the genus Alycaeus.
- Alycaeus is a genus of small land snails.
- The genus is the first to be reported in India, as this genus is restricted to Southeast Asia and not known in the Indian region.
- This new species differs from all other Himalayan alycaeid species due to its yellowish, conical shell.
- The most similar shell in the vicinity is Stomacosmethis spratti from the Shan States, Myanmar.
- It differs from all other Alycaeus species by the characteristic trumpet-like projection on the outer side of the operculum.
- It is, so far, the only Alycaeus species inhabiting the Himalayas.
- All other known Alycaeus species are reported from Laos, Vietnam, southern Thailand, and Peninsular Malaysia.llistic missiles can carry either nuclear or

MISSION LIFE

- As part of Mission LiFE, the Ministry of Environment, Forest and Climate Change conducted awareness activities.
- Mission LiFE (Lifestyle for Environment) was launched by the Prime Minister on 20th October 2022 at Kevadia, Gujarat.
- At the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Glasgow, United Kingdom, India shared the mantra of LiFE - Lifestyle for Environment - to combat climate change.

- India is the first country to include LiFE in its Nationally Determined Contributions (NDCs).

About

- It is an India-led global mass movement to nudge individual and community action to protect and preserve the environment.

Focus

- It focuses on bringing about behavior changes in individuals through simple easy-to-do actions.

Objectives of Mission LiFE

- Mission LiFE seeks to translate the vision of LiFE into measurable impact.
- Mission LiFE is designed with the objective to mobilize at least one billion Indians and other global citizens to take individual and collective action for protecting and preserving the environment in the period 2022 to 2027.
- Within India, at least 80% of all villages and urban local bodies are aimed to become environment-friendly by 2028.
- It aims to nudge individuals and communities to practice a lifestyle that is synchronous with nature and does not harm it.

## Three Phases of Mission LiFE

- Each phase requires a fundamental shift in our approach towards sustainability.
- Implementation Mechanism
- The ideas and ideals of LiFE will be implemented as a mission-mode, scientific and measurable programme.
- It seeks to demonstrate India's commitment to walk the talk on climate change by taking the following steps:
- Coordinated and concerted actions by Ministries/Departments
- Compiling a comprehensive and non-exhaustive list of 75 LiFE actions for individuals, communities and institutions
- Conducting a baseline survey to gain insight into the baseline level of all LiFE action indicators against which success can be measured
- Identification of Key Performance Indicators (KPIs) and impact of LiFE actions Creation of LiFE Dashboard

Impact of Mission LiFE

- When estimated against a business-as-usual

scenario by one billion Indians in 2022-23 to 2027-28, the impact of LiFE actions can be significant, as demonstrated below with select examples:

CYCLONE MIDHILI
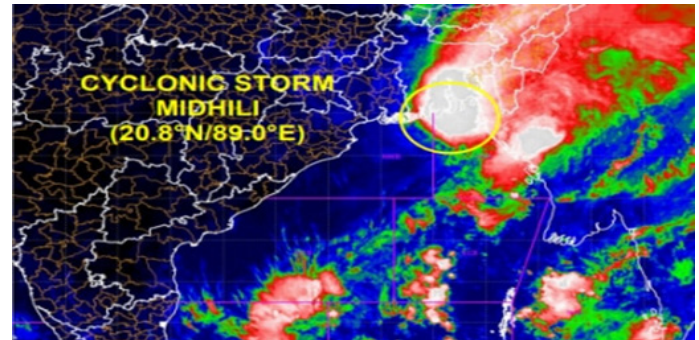
- The Indian Meteorological Department (IMD) declared about the development of Cyclone Midhili in the northwest Bay of Bengal.
- Under the influence of Cyclone Midhili, heavy rainfall is forecasted in the coastal regions of Odisha, West Bengal, Tripura, and Mizoram with wind speed blowing in the range between 40 kmph and 70 kmph.

Cyclones

- A cyclone is defined as a rapid inward air circulation in and around a low-pressure (LP) area.
- They are limited to the atmosphere between 30° N and 30° S latitudes.
- India's Cyclones: Tropical cyclones form in the North Indian Ocean during the pre-monsoon (April-June) and post-monsoon (October-December)

Conditions for the formation of a tropical cyclone:

- A large and constant supply of warm and moist air is required for the creation of a tropical cyclone.
- Strong Coriolis force that can prevent low pressure at the centre from filling.
- Unstable condition that causes local disruptions.
- There is no strong vertical wind wedge to interfere with the vertical transmission of latent heat.

Formation of cyclones:

- Tropical cyclones form only over warm ocean waters near the equator.
- To form a cyclone, warm, moist air over the ocean rises upward from near the surface.

- As this air moves up and away from the ocean surface, it leaves less air near the surface. So basically, as the warm air rises, it causes an area of lower air pressure below.

- Air from surrounding areas with higher air pressure pushes into the low-pressure area. Then this new "cool" air becomes warm and moist and rises, too. And the cycle continues.

- As the warmed, moist air rises and cools the water in the air forms clouds.

- The whole system of clouds and wind spins and grows, fed by the ocean's heat and water evaporating from the ocean surface.

- As the storm system rotates faster and faster, an eye forms in the center.

- It is very calm and clear in the eye, with very low air pressure. Higher-pressure air from above flows down into the eye.

- **When the winds in the rotating storm reach 39 mph (63 kph), the storm is called a "tropical storm". And when the wind speeds reach 74 mph (119 kph), the storm is officially a "tropical cyclone".**

- Tropical cyclones usually weaken when they hit land because they are no longer being "fed" by the energy from the warm ocean waters.

- However, they often move far inland, dumping many centimeters of rain and causing lots of wind damage before they die out completely.

- The name 'Midhili' was given by the

Types of Cyclones

- Cyclones in the North Indian Ocean are typically categorized into various types based on their characteristics.

- Understanding these distinctions is crucial for preparedness and mitigation efforts.

Tropical Cyclones

- Tropical cyclones, often referred to as hurricanes or typhoons in other parts of the world, are one of the most destructive types of cyclones.

- They are characterized by strong winds exceeding 74 miles per hour (119 kilometers per hour) and heavy rainfall.

- The North Indian Ocean witnesses its share of tropical cyclones, which could result in widespread devastation.

Severe Cyclonic Storms

- Severe cyclonic storms are at the next level of intensity.

- These storms have even stronger winds and more significant potential for destruction.

- They often lead to storm surges, which can inundate coastal areas, causing severe flooding.

ONE YEAR OF PROJECT CHEETAH

- A year after it was launched, Project Cheetah has claimed to have achieved short-term success on many counts.
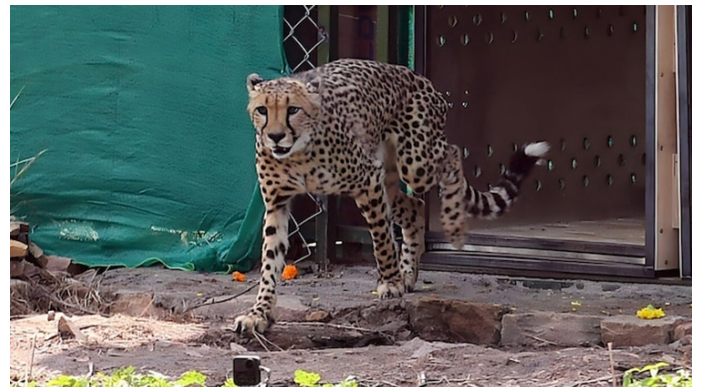
- Project Cheetah is India's ambitious initiative to reintroduce cheetahs after their extinction in the country.

Initiation

- The initiative began on September 17 2022, when Prime Minister Narendra Modi released a group of cheetahs brought from Namibia into an enclosure at Madhya Pradesh's Kuno National Park.

Objectives

- Project Cheetah aims to achieve the following ecological objectives:

- Re-establish the functional role of the Cheetah in representative ecosystems within its historical range. Here the cheetah will serve as a flagship to save not only its prey-base but also other endangered species of the grassland and semi-arid ecosystems. Resources invested in these highly exploited and neglected systems will ensure better management and restore their ecosystem services for the country.

- Contribute to the global effort towards the conservation of the Cheetah as a species.

- Additionally, Cheetah's introduction is likely to improve and enhance the livelihood

options and economies of the local communities.

One year of Project Cheetah

- Project Cheetah has claimed to have achieved short-term success on four counts:
- "50% survival of introduced cheetahs, the establishment of home ranges, birth of cubs in Kuno", and revenue generation for local communities.

SURVIVAL:

- The test of survival is in the wild, not in captivity where animals are under protective care.
- According to India's official Cheetah Action Plan, the male and female cats from both Namibia and South Africa were to spend two and three months respectively inside bomas (enclosures) before being released in the wild.
- In the 12 months since they arrived in India in September 2022, the eight cheetah imports from Namibia should have spent a cumulative 75 'cheetah months' in the wild.
- However, in reality, they spent just about 16 'cheetah months' outside the bomas.
- Together, the 12 South African imports should have spent a cumulative 67 'cheetah months' in the wild.
- In reality, as the chart shows, they spent not even 11 'cheetah months' in the wild.
- Yet, the project lost 40% of its functional adult population.
- Of the 20 cats that arrived in India, six died (Dhatri and Sasha from Namibia; Suraj, Uday, Daksha, and Tejas from South Africa), and two were unfit for the wild. Four cubs were born in India, three of which died, and the fourth is being raised in captivity.

HOME RANGE:

- Only three cheetahs — Namibian imports Asha, Gaurav, and Shaurya — have spent more than three months at a stretch in the wild.
- Even they have been stuck inside bomas since July. It is unlikely any of the cats would have established "home ranges" in Kuno.

REPRODUCTION:

- The goal, as per the Action Plan, was: "Cheetah successfully reproduce in the wild".
- However, Siyaya aka Jwala, the Namibian female that gave birth to four cubs in Kuno, was captive-raised herself.
- She was unfit for the wild and her cubs were born inside a hunting boma.

LIVELIHOOD:

- The project has indeed generated a number of jobs and contracts for the local communities, and the price of land has appreciated significantly around Kuno.
- No human-cheetah conflict has been reported in the area.

Compromises, mistakes

- Three of the eight Namibian cheetahs — Sasha, which was the project's first casualty, and Jwala and Savannah alias Nabha, who were never released outside the bomas in Kuno — were captive-raised, reportedly as "research subjects". They were offered to India to meet the "hard deadline" for the import.
- To get the cheetahs, India promised to support Namibia for "sustainable utilisation and management of biodiversity…at international forums".
- Weeks after the cheetahs arrived, India abandoned its decades-old stand by abstaining at the CITES vote against trade in elephant ivory.
- In Kuno, captive breeding was attempted by putting the sexes together in hunting bomas. However, due to extremely low genetic variation within the species, a cheetah female is very selective in seeking out most distantly related males. That is why giving males access to a female not in heat can lead to violence.
- The project got lucky with Jwala it failed when two South African males killed the female Phinda alias Daksha in May.
- The monitoring teams failed to intervene in time when three cubs succumbed to acute dehydration in May.
- Maggot infestation in multiple animals — which would have affected their gait — also went unnoticed until the festering wounds under their radio collars killed two in July.

Kuno's carrying capacity

- The project's original goal, "to establish a free-ranging breeding population of cheetahs in and around Kuno", has been diluted to "managing" a meta population through assisted dispersal.

- The Cheetah Action Plan estimated "high probability of long-term cheetah persistence" within populations that exceed 50 individuals.

- Cheetal is the cheetah's prime prey in Kuno where project scientists reported per-sq-km cheetal density of 5 (2006), 36 (2011), 52 (2012) and 69 (2013).

- The feasibility report in 2010 estimated that 347 sq km of Kuno sanctuary could sustain 27 cheetahs, and the 3,000 sq km larger Kuno landscape could hold 70-100 animals.

- After the project was revived in 2020, the Cheetah Action Plan assessed Kuno's cheetal density at 38 per sq km which could sustain 21 cheetahs, while a larger landscape of 3,200 sq km could support 36.

- A single population of 50 cheetahs was no longer deemed feasible.

Looking Ahead

- Since Kuno cannot support a genetically self-sustaining population, the project's only option is a meta-population scattered over central and western India.

- But unlike leopards, which dominate this landscape, cheetahs cannot travel the distances between these pocket populations on their own.

- A solution would be to borrow from the South African model that periodically translocates animals from one fenced reserve to another to maintain genetic viability.

AGRICULTURE

KRISHI 24/7

- **Krishi 24/7, the first-ever AI-powered solution for automated agricultural news monitoring and analysis**

- Department of Agriculture and Farmers Welfare (DA&FW) in collaboration with Wadhwani Institute for Artificial Intelligence (Wadhwani AI) developed Krishi 24/7, the first-ever AI-powered solution for automated agricultural news monitoring and analysis, with support from Google.org. Krishi 24/7 will aid DA&FW to identify relevant news, generate timely alerts, and take prompt action to protect farmers' interests and promote sustainable agricultural growth through improved decision-making.

- The introduction of Krishi 24/7 addresses the need for an efficient mechanism to identify and manage agricultural news articles of interest to aid timely decision-making. The tool scans news articles in multiple languages and translates them into English. It extracts essential information from news articles, such as headline, crop name, event type, date, location, severity, summary, and source link, ensuring that the ministry receives timely updates on relevant events published on the web.

- Joint Secretary explained about the functions of the solution which is intended to provide a near real time monitoring of the news articles on Agri ecosystem pub-lished online which will assist the DA&FW to identify news of interest and provide a comprehensive mechanism to shortlist events, create alerts, and take timely action.

GEOGRAPHY

EL SALVADOR

- El Salvador's port authority announced this fee requirement in an official statement dated October 20, indicating that individuals using passports from India or designated African countries would be subject to this charge.

About

- El Salvador, is the country of Central America.
- It is the smallest and most densely populated of the seven Central American countries.
- Despite having little level land, it traditionally was an agricultural country, heavily dependent upon coffee exports.
- El Salvador is bounded by Honduras to the north and east, by the Pacific Ocean to the south, and by Guatemala to the northwest.
- Its territory is situated wholly on the western side of the isthmus, and it is, therefore, the only Central American country that lacks a Caribbean coast.
- Among the Mesoamerican nations that historically controlled the region are the Lenca (after 600 AD), the Mayans, and then the Cuzcatlecs.
- Despite high rates of poverty and gang-related violent crime, El Salvador has the second-highest level of income equality in Latin America.
- Among 77 countries included in a 2021 study, El Salvador was one of the least complex economies for doing business.

NEW PAMBAN BRIDGE

- The new Pamban Bridge is likely to be inaugurated by the Prime Minister in a few months.

About the New Pamban Bridge:

- It is India's first vertical-lift railway sea bridge.
- It connects Rameswaram on Pamban Island to Mandapam on the mainland in Tamil Nadu.

Bridge Length:

- The total length of the bridge is 078 km.
- It will have 99 spans with 18.3-meter-long girders. The navigational span will be 63 metres.

- It will replace the iconic Pamban Bridge, India's first sea bridge, which opened in 1914.
- The new bridge is being built parallel to the old Pamban Bridge by Rail Vikas Nigam Limited.

Features:

- The most unique feature of the new Pamban Bridge is its vertical lift facility. It will help boats pass under the bridge smoothly.
- While the old bridge has the 'Scherzer' rolling lift technology, in which the bridge opens up horizontally to let ships pass through, the new bridge will lift vertically upwards, remaining parallel to the deck. It will be done using sensors at each end.
- The vertical lift span will have electro-mechanical control interlocked with the train control system.
- To allow for shipping traffic to pass under the vertical lift section of the bridge, rail traffic would be stopped. The navigational span would move up vertically to create enough height for boats to pass.
- It will allow a full horizontal length of 72.5 metres for navigation.
- While the new Pamban Bridge is 3 metres higher than the old bridge, it also has a navigational air clearance of 22 metres above mean sea level.
- It has been designed for a double railway line and future electrification as well.

NARMADA RIVER

- A division bench of the MP High Court has given the state administration time to provide in court the rules for construction in the vicinity of the river Narmada in the state's urban and rural districts.
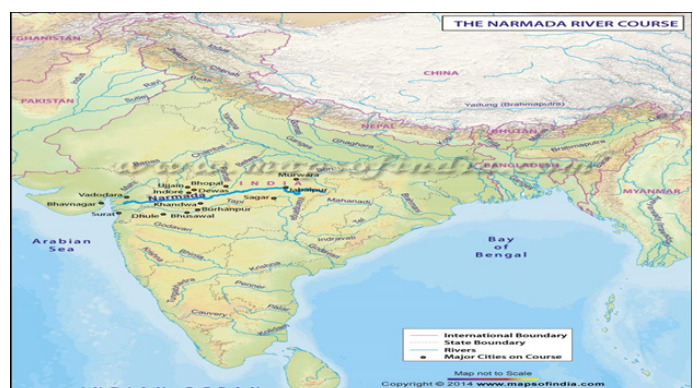
About Narmada River

- The Narmada is peninsular India's greatest west-flowing river.
- The Narmada River runs west through a rift valley formed by the Vindhya Range to the north and the Satpura Range to the south.
- It rises at an elevation of roughly 1057 meters from the Maikala range near Amarkantak in Madhya Pradesh.
- The Narmada basin spans the states of Madhya Pradesh, Gujarat, Maharashtra, and Chhattisgarh and has an area of one lakh square kilometers.
- It is flanked on the north by the Vindhyas, on the east by the Maikala range, on the south by the Satpuras, and on the west by the Arabian Sea.
- It runs 1,310 kilometers from its headwaters in Amarkantak to its estuary in the Gulf of Khambhat.
- The higher sections of the basin are mountainous, but the lower-middle reaches are vast and fertile, making them ideal for farming.

Jabalpur is the basin's sole significant urban center.

- Near Jabalpur, the river cascades (a small waterfall, especially one in a sequence) 15 metres into a canyon to produce the Dhuan Dhar (Cloud of Mist) Falls. Because the gorge is made of marble, it is also known as the Marble Rocks. It creates two 12-metre-high waterfalls at Mandhar and Dardi.
- Near Maheshwar, the river drops from another modest 8-meter-high waterfall known as the Sahastradhara Falls. The Narmada estuary has various islands, the biggest of which is Aliabet. The Narmada may be navigated for up to 112 kilometers from its mouth. Indira Sagar, Sardar Sarovar, Omkareshwar, Bargi, and Maheshwar are the basin's largest hydropower projects.

Tributaries:

The predominant tributaries from the right are – Hiran, Tendori, Barna, Kolar, Man, Uri, Hatni, and Orsang.

- The predominant left tributaries are – Burner, Banjar, Sher, Shakkar, Dudhi, Tawa, Ganjal, Chhota Tawa, Kundi, Goi, and Karjan.

Dams:

- The Major dams on the river include Omkareshwar and Maheshwar dams.

Narmada Basin

- The Narmada basin has an area of 98,796 square kilometers, accounting for roughly 3% of the country's overall geographical area.
- The Vindhyas borders the basin on the north, the Maikala range on the east, the Satpuras on the south, and the Arabian Sea on the west.
- The basin, located at the northernmost tip of the Deccan plateau, encompasses considerable regions in the states of Madhya Pradesh and Gujarat, as well as a minor area in Maharashtra and Chhattisgarh.
- The mountainous regions are in the basin's higher reaches, while the lower middle reaches are broad and fertile lands well suited for farming.

KEDARNATH WILDLIFE SANCTUARY (KWS)

- A case was recently registered against a chopper company by the forest department in Uttarakhand for purportedly landing a helicopter in a restricted zone of Kedarnath Wildlife Sanctuary.

About Kedarnath Wildlife Sanctuary (KWS):

Location:

- The KWS, famously known as the Kedarnath Musk Deer Sanctuary,is located in the Rudraprayag and Chamoli districts of the state of Uttarakhand.
- It was named after the famous Hindu temple of Kedarnath,which lies outside the northern border of the sanctuary. Its alternate name comes from its primary purpose of protecting the endangered Himalayan musk deer.
- It is the largest protected area in the western Himalayas. The sanctuary was established

in 1972, covering a total area of 975.20 km2. It lies in the upper catchment of the Alaknanda and Mandakini Rivers. The altitude ranges from 1,160 to 7,068 m. It is bordered by Kedarnath (6940 m), Mandani (6193 m), and Chaukhamba (7068 m) peaks in the north. The area falls under the West Himalayan Zone in the Palearctic realm.

Vegetation:

- It is covered with temperate forests. The higher and upper regions possess the sub-alpine and alpine coniferous forests. At high altitude, lush green meadows envelope the entire region.

Flora:

- Oak, rhododendrons, Chir Pine and Alpine meadows along with several Himalayan flowering plants.

- Fauna: Some of the mammals are Musk deer, Himalayan Thar, Himalayan Black bear, Snow Leopard, etc, and some birds like Monal, Koklass, and Himalayan Griffon, etc.

DEAD SEA

- Iran-backed 'Islamic Resistance in Iraq' recently claimed an attack against an Israeli target on the Dead Sea Coastline.

- The Dead Sea, also called the Salt Sea, is a salt lake bordering Jordan to the east and Israel to the west.

- However, the western shore's southern half belongs to Israel, while the shore's northern half is in the West Bank, an area claimed by both Israel and Palestine.

- It lies to the east of the Mediterranean Seaand south of the Sea of Galilee.

- It lies in the Jordan Rift Valley and is fed mainly by the Jordan River, which enters the lake from the north.

- It does not have an outlet, and so it loses its

water mainly through evaporation.Its surface and shores are 427 metres below sea level, Earth's lowest elevation on land.

- It is 306 m deep, the deepest hypersaline lake in the world.

- With 2% salinity (in 2011), it is also one of the world's saltiest bodies of water, though Lake Vanda in Antarctica (35%), Lake Assal (Djibouti) (34.8%), Lagoon Garabogazköl in the Caspian Sea (up to 35%), and some hypersaline ponds and lakes of the McMurdo Dry Valleys in Antarctica (such as Don Juan Pond (44%)) have reported higher salinities.

- It is almost ten times saltier than ordinary

- This salinity makes for a harsh environment in which animals cannot flourish, hence its name.

- It is 50 kilometres long and 15 kilometres wide at its widest point.

- The Dead Sea seawater has a density of 1.240 kg/L, which makes swimming in its waters similar to floating.

INTERNATIONAL RELATIONS

UN GENERAL ASSEMBLY

- India refused to back the UN General Assembly's call for a Humanitarian truce in Gaza.

About UNGA

- The United Nations General Assembly is one of the six principal organs of the United Nations (UN).
- It serves as UNGA's main deliberative, policymaking, and representative organ.
- The UNGA is the only UN organ where all member states have equal representation.
- Comprising all Member States, it provides a unique forum for multilateral discussion of the full spectrum of international issues covered by the Charter of the United Nations.
- The first session of the UN General Assembly was convened on 10 January 1946 in the Methodist Central Hall in London.

Headquarters: New York

Responsibilities

- The UNGA is responsible for the UN budget, appointing the non-permanent members to the Security Council, appointing the UN secretary-general, receiving reports from other parts of the UN system, and making recommendations through resolutions.
- The Assembly meets in regular sessions from September to December each year, and thereafter as required.
- It discusses specific issues through dedicated agenda items or sub-items, which lead to the adoption of resolutions.

PARTNERSHIP FOR GLOBAL INFRASTRUCTURE AND INVESTMENT (PGII)

- Recently, the Union Minister for Commerce and Industry participated in the Investor Forum of the Partnership for Global Infrastructure and Investment (PGII) & Indo-Pacific Economic Framework for Prosperity (IPEF).
- About the Partnership for Global Infrastructure and Investment (PGII):
- It is a developmental initiative aimed at narrowing the infrastructure gap in developing countries as well as helping to accelerate progress on SDGs globally.

- The infrastructure plan was first announced in June 2021 during the G7 Summit in the UK.
- Funding: It aims to build projects through grants and investments.
- The emphasis of the PGII is on building human infrastructure in the developing world and improving the quality of education and health care facilities.

Key Facts about G7 Group

- It is an intergovernmental organisation of leading industrialised nations formed in 1975.
- Member countries: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
- It meets annually to discuss issues such as global economic governance, international security, and energy policy.
- The host of the G7 summit, also known as the presidency, rotates annually among member countries.
- It was formerly referred to as the G-8 until Russia was suspended from the group in 2014 after annexing Crimea.

UNESCO DECLARES GWALIOR THE 'CITY OF MUSIC'

- The city of Gwalior in Madhya Pradesh has been added to UNESCO's Creative Cities Network (UCCN) for its strong commitment to harnessing culture and creativity.
- Kozhikode from Kerala was also among the 55 new cities to join the network.
- Gwalior's Musical Part (Background, Famous Musical Personalities, etc)
- All the music gharanas of the country have their origins in the Gwalior gharana.

- Gharana in Hindustani music is a community of performers who share a distinctive musical style that traces to a particular instructor or region.
- Before Hindustani classical music was divided into various gharanas, Gwalior emerged as the first proper gharana of music.
- Hence, the Gwalior gharana is considered the most ancient and 'Gangotri' (meaning origin) of Khyal raga.
- Khayal singing, as we know it today, emerged from dhrupad under the aegis of Gwalior gharana while incorporating the elements of qawwali.
- Famous Musicians Associated with Gwalior Gharana:
- Gwalior gharana music has thrived under the patronage of the erstwhile royal families of Gwalior such as Raja Mansingh and Scindias.
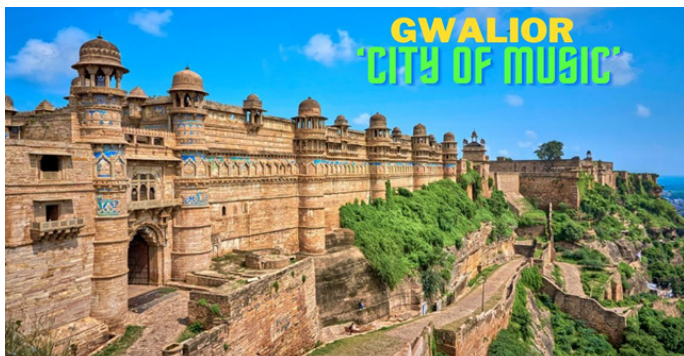
- Raja Dungarendra Singh Tomar:
- Raja Man Singh's great grandfather Dungarendra Singh Tomar, a musician himself, attempted a revival of Indian classical music through academic interest and patronage.
- He is known to have gifted two music treatises in Sanskrit – Sangeet Shiromani and Sangeet Choodamani – to his friend and Sultan of Kashmir Zain-ul-Abdin.
- The treatises comprised detailed discussions on music and musical instruments.

COUNCIL ON ENERGY, ENVIRONMENT AND WATER

- A new issue brief was released by the Council on Energy, Environment and Water (CEEW).

Findings of the Report

- Developed countries are projected to collectively emit around 3.7 giga tonnes extra carbon dioxide (CO2) in 2030, against the reduction goals expressed in their nationally determined contributions (NDCs) under the 2015 Paris Agreement.
- This represents a 38% emission overshoot, with the United States, European Union, and Russia responsible for 83% of this.
- Only two developed countries- Norway and Belarus are on track to achieve their nationally determined contributions (NDCs) for this decade.
- Currently, developed countries' NDCs for 2030 collectively represent a 36% reduction in emissions from their 2019 levels. This is less than the global average of 43% that is required to keep the 1.5°C target alive.
- The report highlights the implications of this for developing countries, which need sufficient carbon space to address their development challenges.
- To achieve a net-zero emissions goal by 2050, developed countries bank on drastically reducing emissions after 2030.
- Even if net zero by 2050 is achieved, developed countries would still consume 40-50% of the remaining carbon budget.

Recommendations made

- Developed countries need to enhance their NDCs and scale up climate action to bridge the projected 3.7 GtCO2e implementation gap by 2025.
- What remains of the global carbon budget to keep global warming below 1.5°C is estimated to be about 500 GtCO2.
- This amount will be depleted by the end of the decade at the current rate of global emissions according to the Intergovernmental Panel on Climate Change (IPCC).
- Around 40-50% of the remaining global carbon budget for the 1.5°C target would be consumed by developed countries even if they achieve net zero emissions by 2050, CEEW has projected.

Implications and Closing Remarks

- Even in this critical decade, developed countries are not projected to meet their 2030 NDC targets.
- This failure has implications for the limited global carbon budget available now, especially for developing countries like India.
- The climate journey of developed countries

– historical and proposed – does not show deep enough emission reductions to reflect climate leadership.

- This means that the burden to mitigate global warming shifts to developing countries, which is problematic in a context where financial support to developing countries to achieve this transition has not been forth-coming, as promised.

- It is also crucial for the Global South to have produced this analysis and not just rely on handed-down assessments that focus disproportionately on emissions of emerging economies.

- To fulfil their responsibility as historical emitters and financially capable economies, developed countries must do more than meet the global average in emission reduction.

- The Council on Energy, Environment and Water, commonly known as CEEW, is a Not-for-profit Think Tank and policy institution.

- It is based in New Delhi, India.

- CEEW was founded in 2010 with a mission to identify integrated solutions required to achieve balanced growth and development for India.

- CEEW was formed to provide independent research-based insights to policymakers for building a sustainable India.

- CEEW's research areas include energy and resource efficiency and security; power sector reforms, industrial decarbonization, sustainable mobility and cooling, sustainable food systems, climate risks and adaptation, air quality, water resources management, sustainability finance, energy-trade-climate linkages, and climate geoengineering governance.

- CEEW is an independent research institution, which receives its funding through donations and grants.

SCIENCE AND TECHNOLOGY

NEW MADE-IN-INDIA EV CHARGING STANDARD FOR BIKES AND SCOOTERS

- The Bureau of Indian Standards (BIS) has approved an indigenously developedAC and DC combined charging connector standard for light electric vehicles(LEVs) such as scooters, bikes, and rickshaws.

- Electric vehicle (EV) charging connector standards are conceptually similar to charg-ing connector standards for mobile phones, such as the USB Type-C charger or Apple's lightning charger.

- AC and DC are different forms of electrical power, and in the context of EVchargers, the difference between AC and DC is where the AC/alternating current gets converted to DC/direct current.

- Most chargers and electrical appliances are AC powered, meaning the AC gets converted to DC outside of the car, right from the grid, and then goes into thecar's battery.

- On the other hand, DC converts in the charger plug-in itself.Electric vehicle car batteries in North America will only accept DC and thus chargers are always AC/DC or DC. Mean-while, in Europe and Japan, their EVbatteries may be charged using AC only.

- What is the New Made-in-India EV Charging Standard?

The new standard, ISI7017 (Part 2 / Sec 7): 2023, cleared by BIS, has been developed through collaboration among -

- NITI Aayog,

- The Department of Science and Technology,

- Electric two-wheeler maker Ather Energy, and

- Various other government and industry stakeholders.

- This indigenously developed charging standard is the first in the world that combines AC and DC for LEVs.

- Combined AC and DC charging standards for electric 4-wheelers are already in use around the world, like the Combined Charging System (CCS) standard that is widely used in Europe.

- A combined charging standard is attractive because of its interoperability -which means

that it can be used by different kinds of EV models and charging infrastructure providers.

- Although the new approved standard fixes the problem of different standards forAC and DC charging by creating a combined standard, it does not mandate EV makers to use a uniform standard.

- This will lead to range anxiety (the fear that the vehicle would run out of charge,

- and there will be nowhere to recharge it) and hampers faster adoption of EVs.

Why is a National Standard Needed for India?

- In India, EV makers are not mandated to follow a specific standard for charging connectors. Thus, electric 2-wheeler makers such as Ola Electric, Ather Energy,and Ultraviolette Automotive, all use different charging standards for their EVs.

- This is much like how Apple phones until recently used a lightning port and Android phones use a USB Type-C port. For instance, Ola's proprietary Hyperchargers are designed for charging Ola Electric scooters only.

- Too many charging standards for EVs makes it difficult for public charging stations to cater to each individual type. This adds to range anxiety.What is the Situation in Other Countries Around the World?

CHINA: The world's largest electric car market in terms of both sales and vehicles on the road, uses a national standard for EV charging connectors that is called GB/T.

- The national standard, along with one of the densest networks of charging stations in the world, has allowed China to productively address concerns around range anxiety.

UNITED STATES: The US does not have a national standard, but EV makers have been collaborating to push for some degree of standardisation.

- For instance, Ford and General Motors (GM) are adopting the North American Charging Standard (NACS) developed by Tesla, so that their EVs can access Tesla's network of fast chargers across North America.

EUROPE: In Europe, CCS is the predominant charging connector standard, and is also a European Union (EU) requirement for EV charging networks.

JAPAN: Japan's predominant charging standard is called CHAdeMO (developed in 2010).

OHIO CLASS SUBMARINE

- A US nuclear-powered Ohio-class submarine is in the Middle East to help prevent the Israel-Hamas war from spiraling into a broader conflict.

- The Ohio class submarine is a class of nuclear-powered submarines currently in service with the United States Navy.

- These submarines are designed for extended underwater operations and are equipped with advanced technology to support various missions, including strategic deterrence, surveillance, and special operations.

History and Development

- The Ohio class submarines were developed during the Cold War to provide the United States with a robust and survivable sea based strategic deterrent.

- The first Ohio class submarine, USS Ohio (SSBN-726), was commissioned in 1981, and a total of 18 submarines were built between 1976 and 1997.

Design and Specifications

- Dimensions: The Ohio class submarines are approximately 560 feet (170 meters) long and have a submerged displacement of around 18,750 tons.

- Propulsion: They are powered by a nuclear reactor, providing virtually unlimited range and the ability to remain submerged for extended periods.

- Armament: Originally designed as ballistic missile submarines (SSBNs), the Ohio class was later modified to carry conventional cruise missiles, making them capable of conducting a variety of missions, including precision strike and intelligence gathering.

Mission Capabilities

- Strategic Deterrence: Ohio class submarines play a crucial role in the United States' nuclear triad, serving as a platform for submarine-launched ballistic missiles (SLBMs) armed with nuclear warheads. These submarines contribute to the nation's strategic deterrence posture and serve as a critical component of national security.

- Conventional Capabilities: With their ability to carry and launch a variety of conventional cruise missiles, Ohio class submarines have the flexibility to engage in non-nuclear missions, including precision strikes, intelligence gathering, and surveillance operations.

Strategic Importance

- Given their capacity for extended deployments and their role in strategic deterrence, Ohio class submarines are a critical component of the U.S. Navy's global force projection and national security strategy.

- They contribute to maintaining a credible nuclear deterrent and provide the United States with a significant strategic advantage in ensuring the security and stability of international waters.

NASM-SR

- The recent development regarding the successful trial of India's indigenous **Naval Anti-Ship Missile Short Range (NASM-SR)** holds significant importance in the country's defense capabilities.

- Indigenous Missile Advancements: The NASM-SR test signifies India's progress in developing indigenous naval armaments, boosting self-reliance in defense technology, and reducing dependency on imports.

- Collaboration between DRDO and Indian Navy: The successful trial represents a collaborative effort between the Defence Research and Development Organisation (DRDO) and the Indian Navy, showcasing joint endeavors in enhancing naval firepower.

- Technological Advancements: The NASM-SR incorporates advanced technologies, featuring an indigenous launcher for helicopters and a guidance system with state-of-the-art navigation and integrated avionics, reflecting India's technological capabilities in missile development.

Development in Long-Range Missiles

- Long Range Anti-Ship Missile: India's preparations for the inaugural trial of a new Long Range Anti-Ship Missile, surpassing the range of the BrahMos missile, demonstrate the country's endeavor to develop missiles with extended operational ranges, enhancing maritime defense capabilities.

- Enhanced Range of BrahMos: The BrahMos missile, developed jointly by India and Russia, has undergone advancements, with an extended range from its original 290 km to a range of 350 to 400 km, further bolstering India's missile capabilities.

Complementary Defense Capabilities

- MRSAM's Effectiveness: The successful firing of the Medium Range Surface-to-Air Missile (MRSAM) from INS Visakhapatnam in March demonstrates India's capability to intercept Anti-Ship Missiles, showcasing a multi-layered defense approach.

- Collaboration with International Entities: Collaborative efforts between DRDO and Israel Aerospace Industries (IAI) for the development of MRSAM highlight India's engagements with global defense entities to strengthen its defense systems.

About

- Anti-ship missiles (ASMs) are advanced guided projectiles specifically designed to target and destroy surface ships, making them a critical component of naval warfare.

- These missiles are engineered to be launched from various platforms such as aircraft, ships, submarines, and coastal defense batteries.

Key Features of Anti-Ship Missiles:

- Guidance Systems: ASMs employ advanced guidance systems such as radar, infrared, GPS, and inertial navigation systems to locate and home in on their targets accurately.

- Versatile Platforms: They can be deployed from different launch platforms, including aircraft (air-launched), ships (surface-launched), submarines (submarine-launched), and coastal defense systems (land-based launchers).

- Stealth and Maneuverability: Modern ASMs are designed to be stealthy and possess high maneuverability to evade enemy

defenses, including anti-missile systems and countermeasures.

- Warhead Options: These missiles are equipped with various warhead types, including high-explosive, armor-piercing, shaped charges, and sometimes even nuclear warheads, maximizing their impact on targets.

BULAVA BALLISTIC MISSILE

- Russia recently carried out a successful test launch of the Bulava ballistic missile, designed to carry nuclear warheads.
- It is a new Russian submarine-launched Intercontinental Ballistic Missile (ICBM).
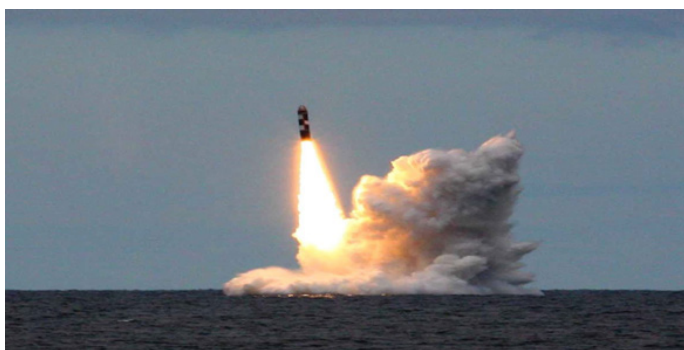
- Development of this missile commenced in 1998. The first powered flight test of the Bulava missile occurred in September 2005. It's first submerged test launch followed in December.
- It was designed to be deployed onto Russia's Borei-class ballistic missile submarines (SSBNs).
- Features:It was designed to be the backbone of Moscow's nuclear triad and has a range of over 8,000 kilometres (close to 5,000 miles).
- It is 12-13.5 m in length and has a diameter of approximately 2.0 m. Launch Weight: 36,800 kg
- It is a three-stage solid-fuel missile.
- It is designed to carry multiple warheads. Each warhead will strike a different target.
- It can carry six Multiple Independent Re-entry Vehicles (MIRVs). These MIRVs are capable of manoeuvring in-flight and re-targeting, in order to outmanoeuvre hostile air defences. It is stated that this missile has an accuracy of 350 m.

GPS TRACKER

- A prisoner (Bhat) in Jammu and Kashmir was released on bail after he was tagged with a Global Positioning System (GPS) tracking device to monitor his movements.
- This is the first time in the country that a GPS tracker has been put to such use.

Details

- GPS (Global Positioning System) trackers are devices that use satellite signals to determine and record the precise location of an object or person.
- These trackers leverage a network of satellites orbiting the Earth to provide accurate positioning information in real-time.
- Use of GPS Trackers in Bail Conditions
- Global Prevalence: GPS trackers as a bail condition in multiple countries like the US, UK, and Malaysia.
- Debut in India: Bhat's case marking the first instance of GPS tracker usage for bail.
- Future Indications: J&K Police considering similar measures in upcoming cases.
- Legal Standpoint and Lack of Specific Provisions
- Court Sanction: Court approval for employing a GPS anklet on Bhat without explicit legal provisions.
- Human Rights Activists' Concerns: Absence of specific legal frameworks allowing such tracking highlighted by activists.
- International Legal Frameworks and Examples
- UK & Malaysia: Legal frameworks in these countries governing electronic monitoring.
- In the UK: Monitoring under the Terrorism Prevention and Investigation Measures Act, 2011.
- In Malaysia: Laws like the Prevention of Crime Act, Security Offences Act, etc., regulating electronic monitoring.

ONE PORTAL FOR DRUG CONTROL

- One Portal for Drug Control: Upcoming IT Platform to Track Medicines End-to-End
- The integrated IT platform that apex drug regulator (CDSCO) has been working on will be able to track products right from the

stage of procuring raw material, to supply chain, and finally patterns of consumption.

- Drug Regulation in India
- Idea to Create One Portal for Drug Control
- About the Drug Portal and its Functions
- Significance of the Drug Portal

Drug Regulation in India:

- The Drugs and Cosmetics Act, 1940 and Rules 1945:These have entrusted various responsibilities to central and state regulators for regulation of drugs and cosmetics.
- Central Drugs Standard Control Organisation (CDSCO):The CDSCO under the Directorate General of Health Services, Ministry of Health & Family Welfare, is the National Regulatory Authority (NRA) of India.

Under the Drugs and Cosmetics Act, CDSCO is responsible for -

- Approval of Drugs.
- Conduct of Clinical Trials.
- Laying down the standards for Drugs.
- Control over the quality of imported Drugs in the country.
- Coordination of the activities of State Drug Control Organizations.
- Further CDSCO along with state regulators, is jointly responsible for grant of licences of certain specialised categories of critical Drugs such as vaccine and sera, etc.
- The Indian government has announced plans to subject all medical devices, including implants and contraception, to CDSCO scrutiny.
- Drugs Controller General of India (DCGI):DCGI is the head of department of the CDSCO of the Government of India responsible for approval of licences of specified categories of drugs such as blood and blood products, IV fluids, vaccines and sera in India.
- DCGI also sets standards for manufacturing, sales, import, and distribution of drugs in India.

Idea to Create One Portal for Drug Control:

- The idea to create a unified portal was first proposed during a Chintan Shivir (brainstorming session) earlier this year (in February 2023).

- The brainstorming session brought all stakeholders together to discuss ways to improve the regulatory framework after a series of incidents came to light.
- For example, the Indian manufactured syrups were found to be contaminated and were even linked to deaths of children in the Gambia and Uzbekistan.
- At the same meeting, it was decided that the global standard for good manufacturing practices will be made mandatory for all Indian companies.
- The government has already asked around 8,000 smaller companies that do not comply with it to do so.
- Now, a team has been formed that is dedicated to working on developing the portal and getting it up and running.
- The online platform will need to be compatible with other government portals such as the Government e-Marketplace, Bureau of Indian Standards and Clinical Trial Registry.

About the Drug Portal and its Functions:

- The government has called for software service providers to develop the system.
- Apart from manufacturers, distributors and retailers will also need to upload their invoices on the portal for this end-to-end tracking to become possible.
- The portal will create provisions to capture information from various stakeholders routinely "similar to ITR returns and GST filing".
- Once operational, all other portals used by drug regulators will be discontinued. Hence, the portal will become a single window for all drug regulatory activities.
- It will share information about spurious and not of standard quality medicines with state regulators to tackle the problem of the movement of these drugs across state boundaries.
- Investigations and prosecution launches will also be done through the portal in such cases.
- It will also have a provision to sign documents using authentication mechanisms like OTP, Aadhaar, PAN card, and DigiLocker.
- It will also help track all types of court cases for prosecution and convictions.

- The upcoming portal will have separate dashboards for separate stakeholders, allowing them access to custom reports on a need-to-know basis.

Significance of the Drug Portal:

- The integrated IT platform will bring in transparency and uniformity in all the processes (of drug manufacture and distribution) and create confidence in domestic and international markets.

- The platform will bring online activities that are still done physically like periodic safety updates, show cause notices, adverse event reporting and post approval changes.

- The portal will help improve inspections by assigning inspectors at random to various sites in a masked manner, randomised allocation of work such as

- Processing applications for licences and approvals, and

- Assigning QR codes to samples collected and reports to allow verification at every stage of the process.

- It will also automatically generate officials' performance reports.

- The portal will create searchable registries of manufacturers, marketeers, retailers, pharmacies, and even subject matter experts.

REPORTS AND INDICES

WHO GLOBAL TB REPORT

- The WHO Global TB Report for 2022 highlights a concerning trend in the fight against tuberculosis. Despite progress made in the past years, the impact of COVID-19 disruptions on healthcare systems has hampered efforts to combat the disease effectively.

- In 2022, there were 7.5 million newly diagnosed cases of TB globally. This marked the highest number since the WHO began monitoring TB cases in 1995. In 2020, there were 5.8 million TB cases globally. In 2021, the number of TB cases increased to 6.4 million.

- The COVID-19 pandemic strained healthcare systems worldwide, diverting resources, personnel, and infrastructure away from routine health services, including TB diagnosis and treatment.

- Lockdowns, travel restrictions, and fear of exposure to COVID-19 deterred individuals from seeking medical care, resulting in delayed access to healthcare facilities for TB screening and diagnosis.

- The surge in COVID-19 cases overwhelmed healthcare facilities, making it challenging for them to maintain the same level of TB diagnosis and treatment services, leading to a backlog.

- Disruptions in global supply chains affected the availability of TB diagnostic tests and medications, making it even more difficult to provide timely care to TB patients.

- Many healthcare workers were reassigned to COVID-19-related tasks, leaving a shortage of personnel for TB diagnosis and treatment services.

- The fear of contracting COVID-19 in health-care settings made many individuals reluctant to visit hospitals or clinics, resulting

in delayed diagnosis and treatment of TB cases.

- Mass screening and active case-finding programs were scaled back or halted during the pandemic, allowing TB cases to go undetected.

- Some TB patients face interruptions in their treatment due to lockdowns, quarantine requirements, or difficulties in obtaining medication, which can lead to drug resistance and prolonged illness.

- Economic challenges resulting from the pandemic made it harder for individuals to afford healthcare services, further delaying TB diagnosis and treatment.

- Efforts and resources focused on COVID-19 took precedence, leading to a temporary neglect of TB control and prevention measures, exacerbating the TB backlog.

Global TB Targets

- Despite efforts to combat TB, global targets set by the WHO have either been missed or are off track.

- The net reduction from 2015 to 2022 was 8.7%, falling far short of the WHO's End TB Strategy milestone of a 50% reduction by 2025.

High Impact Countries

- India, Indonesia, and the Philippines, which had previously made significant progress in reducing TB cases, experienced setbacks in 2022.

- These countries collectively accounted for nearly 60% of the reduction in newly diagnosed TB cases in 2020 and 2021 but saw an increase in cases in 2022.

Impact on Mortality

- TB caused an estimated 1.30 million deaths in 2022, approaching the level seen in 2019.

- COVID-19 disruptions are estimated to have resulted in nearly half a million excess deaths from TB between 2020 and 2022.

Treatment Success Rates

- Despite challenges, there was an improvement in treatment success rates.

- 88% of people treated for drug-susceptible TB and 63% of people with multidrug-resistant TB (MDR-TB) or rifampicin-resistant TB (RR-TB) had successful outcomes.

Call to Action

- The report emphasizes the need for translating the commitments made at the 2023 UN high-level meeting on TB into action to effectively combat the global TB epidemic.

GLOBAL TALENT COMPETITIVENESS INDEX (GTCI), 2023

- The Global Talent Competitiveness Index has seen India fall sharply from rank 83 ten years ago to rank 103 in its latest report out recently.

About Global Talent Competitiveness Index (GTCI):

- It measures how countries grow, attract, and retain talent.

- It is an annual benchmarking report published by the prestigious chain of business schools, INSEAD.

- It provides a unique resource for decision makers to understand the global talent competitiveness picture and develop strategies to boost their economies.

- The index uses two sub-indices: input and output.

- The input measures regulatory and business environments, as well as steps being taken to foster talent and retain it.

- The output side evaluates the quality of talent.

Highlights of GTCI 2023:

- The 10th edition of the report covers 134 countries around the world across all income groups.

- Singapore, Switzerland, and the United States are among the top three countries on the index.

- Denmark, the Netherlands, Finland, Norway, Australia, Sweden, and the United Kingdom make up the rest of the Top 10.

- India is ranked 103, the worst among that of the BRICS countries. China remains at the

top of the BRICS group of countries at rank 40, Russia at 52, South Africa at 68 and Brazil at 69.

- Other countries ranking better than India are Rwanda, Paraguay, Tunisia, Namibia, Bolivia, Ghana, El Salvador, Gambia, Kenya, Morocco, and Eswatini.
- As per the report, other emerging countries have shown improvements on this index, with China, Indonesia, and Mexico being cited for special mention.

Climate Services report 2023

- Recently, the World Meteorological Organization (WMO) released Climate Services report 2023.
- Less than 25 per cent of health ministries across the world utilise climate information and services to monitor health risks related to climate sensitivity.
- It highlights health protection as a priority in almost all countries and identifies the need for high-quality information for better decision making.
- While extreme heat causes the greatest mortality of all extreme weather, heat warning services are provided to health decision makers in only half of the affected countries;
- Climate change mitigation leading to reducing air pollution can save lives; and
- Investments to improve the capabilities of the health sector to safeguard the most vulnerable are insufficient.

Key facts about the World Meteorological Organization

- It originated from the International Meteorological Organization (IMO), which was founded in 1873.

It was established in 1950.

- It is the specialized agency of the United Nations for meteorology(weather and climate), operational hydrology and related geophysical sciences.
- Currently it has a membership of 187 countries.

Governance Structure:

- Its supreme body is the World Meteorological Congress, which consists of representatives of all members.
- It meets at least every four years to set general policy and adopt regulations.A 36-member Executive Council meets annually and implements policy.

Headquarters: Geneva, Switzerland.

DIGITAL TWIN

- Recently, the Survey of India (SoI) and Genesys International, a leading Indian mapping company, announced a strategic tie-up for a three-dimensional (3D) digital twin-mapping programme in India.

About Digital Twin:

- It is a virtual depiction of a real-world entity, be it a product, process, person or location, capable of comprehending and gauging its tangible counterparts.
- The twin digital copy will also help policymakers understand how infrastructure will function in different situations, such as high-footprint events, an increase in population, or natural disasters.
- The strategic partnership aims to create digital twins of major cities and towns, leveraging Genesys' all-India highly accurate navigable maps.
- The Genesys constellation of sensors and SOI's recently launched Continuously Operating Reference Stations (CORS) network allow for real-time high-precision positioning data.

Key points about the Survey of India

- It was set up in 1767.
- It is the National Survey and Mapping Organization of the country, under the Department of Science & Technology.
- It is the oldest scientific department of the Government of India.
- It bears a special responsibility to ensure that the country's domain is explored and mapped suitably, provide base maps for expeditious and integrated development, and ensure that all resources contribute with their full measure to the progress, prosperity and security of our country now and for generations to come.

INDIAN SOCIETY / SOCIAL ISSUES / SOCIAL JUSTICE

THE CLIMATE CHANGED CHILD

- A new UNICEF report titled 'The Climate Changed Child.' has been released.
- The report captured how the various climate and environmental shocks driven by climate change are impacting the lives of children.

Findings of the Report

Most affected children

- The largest share of affected children resides in the Middle East and North Africa and South Asia regions.
- In these areas, limited water resources, high seasonal variability, and risks of groundwater table decline or drought persist.

Water Security

- The report analyses three tiers of water security globally—water scarcity, water vulnerability, and water stress.
- Alarmingly, 436 million children face extreme water vulnerability, grappling with both high-water scarcity and low drinking water service levels, putting their lives, health, and well-being at risk.
- This extreme water vulnerability is a significant driver of preventable diseases, particularly among children under 5.
- The most affected children predominantly live in low- and middle-income countries in sub-Saharan Africa, Central and Southern Asia, and Eastern and South-Eastern Asia.
- In 2022, 436 million children were residing in areas experiencing extreme water vulnerability.
- Countries such as Niger, Jordan, Burkina Faso, Yemen, Chad, and Namibia are among the most impacted, with eight out of 10 children facing exposure.

Heatwave

- 559 million children are currently exposed to high heatwave frequency. This can impact all the 2.02 billion children globally by 2050. Around 470 million children, as of 2022, faced high or extremely high drought risk.

Floods

- The health of children is affected by extreme weather events like floods that are linked with climate change.
- Floods compromise safe water supply, damage sanitation facilities and occur in areas grappling with open defecation issues, leading to contamination of water. This can make way for outbreaks of diseases like diarrhoea.
- Child malnutrition is worsened by crop failures and rising food prices, exacerbated by higher temperatures and increased rainfall linked to climate change.

Closing Remarks

- This year, UNICEF is launching the Sustainability and Climate Action Plan, which commit to galvanising efforts to fill global gaps to protect the most vulnerable children.
- The report asserted that confronting the planetary crisis for children requires a global movement of partnership.
- COP28 is a critical opportunity to finally put children on the climate change agenda.
- UNICEF called for embedding children and intergenerational equity in the Global Stocktake.
- Global Stocktake is a process for countries and stakeholders to see where they are collectively making progress towards meeting the goals of the Paris Climate Change Agreement and where they are not.
- UNICEF also pitched for inclusion of children and climate-resilient essential services within the final decision on the Global Goal on Adaptation (GGA).
- GGA collective commitment under Article 7.1 of the Paris Agreement is aimed at "enhancing" (the world's) adaptive capacity, strengthening resilience, and reducing vulnerability to climate change.
- Ahead of COP28, the child rights body also

called for making the Loss and Damage Fund and funding arrangements child-responsive. These, it hinted, could be made a reality with child rights embedded in the fund's governance and decision-making process.

- The fund is aimed to provide financial assistance to countries most vulnerable and impacted by the effects of climate change and was a highlight at COP27.

KAMBALA IN BENGALURU

For the first ever time, Kambala was held outside the coastal city.

The traditional buffalo race, Kambala, is set to take place for the first time in Bengaluru, Karnataka.

Kambala is a buffalo race held in Coastal Karnataka districts (Udupi and Dakshina Kannada) during the winter months when farmers harvest their paddy crops.

The race is held on two parallel tracks filled with mud and water. Each pair of buffaloes will also have a jockey, or 'Kambala runner' to control and command the animals on the track.

The team that wins qualifies for higher rounds till a champion emerges.

Apart from winning the race, targets also include splashing water; in fact, some winners are even declared on the amount of water splashed; this is called 'kolu'.

ANCIENT, MODERN INDIA AND ART & CULTURE

7TH EDITION OF GANGA UTSAV CELEBRATED WITH FESTIVE FERVOR

- The 7th edition of Ganga Utsav was organized today by the National Mission for Clean Ganga in New Delhi.

- Addressing the gathering, Ms. Debashree Mukherjee expressed that the Ganga is not merely a river but a profound emotion that resonates with all of us. She expressed her satisfaction in witnessing the remarkable progress in the Ganga Rejuvenation efforts, especially in collaboration with the new generation. She drew attention to the beautiful connection between Ghalib and the Yamuna, emphasizing the deeply rooted cultural significance of our rivers. She stressed that the preservation of rivers is a shared responsibility of everyone.

NEOLITHIC AGE

- A rock art dating back to the Neolithic period was recently found in the Palnadu district of Andhra Pradesh.

- The Neolithic Age, also called the New Stone Age, is the final stage of cultural evolution or technological development among prehistoric humans.

- The term Neolithic is most frequently used in connection with agriculture, which is the time when cereal cultivation and animal domestication were introduced.

- Because agriculture developed at different times in different regions of the world, there is no single date for the beginning of the

Neolithic age. In India, the starting point of the Neolithic is generally thought to have occurred sometime around 7000 BCE.

- The Neolithic followed the Mesolithic Period and preceded the Chalcolithic Age, or the early period of metal tools.

Features of the Neolithic Age:

- It was characterised by stone tools shaped by polishing or grinding, dependence on domesticated plants or animals, settlement in permanent villages, and the appearance of such crafts as pottery and weaving.

- The houses were built of mud and reed in rectangular or circular shapes.

End of the Neolithic Age:

- Towards the end of the Neolithic era, copper metallurgy is introduced, which marks a transition period to the Bronze Age, sometimes referred to as the

Chalcolithic or Eneolithic Era.

- In time, bronze became the primary material for tools and weapons, and a good

- part of the stone technology became obsolete, signalling the end of the Neolithic

- and thus of the Stone Age. Some of the important Neolithic sites in India include Burzahom in Kashmir,

Neolithic Implements
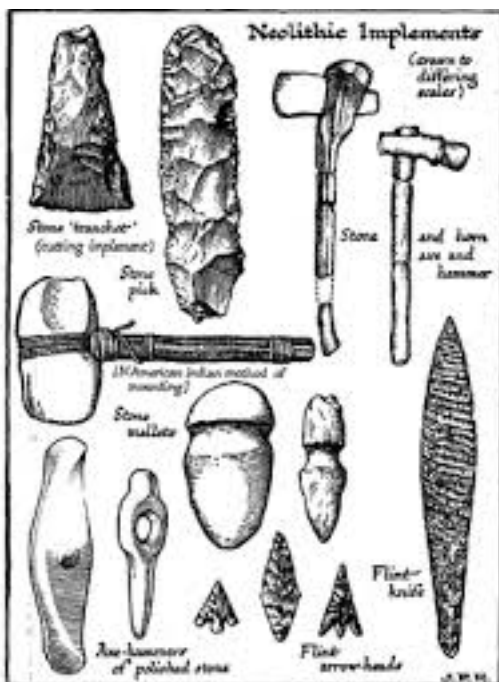
PERSONALITY IN NEWS

BIRSA MUNDA

- The Prime Minister recently announced he will go to the native village of tribal icon Birsa Munda on his birth anniversary and launch a welfare scheme for the community.

- He was a folk hero and a tribal freedom fighter hailing from the Munda tribe.

- He spearheaded an Indian tribal mass movement that arose in the Bihar and Jharkhand belts in the early 19th century under British colonisation.

- Munda rallied the tribals to fight against the forceful land grabbing carried out by the British government, which would turn the tribals into bonded labourers and force them to abject poverty.

- He influenced his people to realise the importance of owning their land and asserting their rights over it.

- As a reaction to the introduction of the Zamindari system, or Permanent settlement in tribal areas, Birsa Munda in 1894 declared "Ulgulan", or revolt, against the British and the Dikus – the outsiders.

- He created a faith called 'Birsait'.

- Known as 'Dharti Abba' or the Earth Father, Birsa Munda stressed the need for the tribals to study their own religion and not forget their cultural roots.

- Birsa Munda propagated the principles of Hindu religion.

- He died on June 9, 1900, at age 25.

- His struggle against exploitation and discrimination against tribals led to a big hit against the British government in the form of the Chotanagpur Tenancy Act being passed in 1908. The act restricted the passing on of land from the tribal people to non-tribals.

- In recognition of his impact on the national

- movement, the state of Jharkhand was created on his birth anniversary in 2000.
- November 15, the birth anniversary of Birsa Munda, was declared 'Janjatiya Gaurav Divas by the Central Government in 2021.

CHATRAPATHI SHIVAJI MAHARAJ

Why in the news?

Maharashtra's Cultural Affairs Ministry has signed a memorandum of understanding (MoU) with the Victoria and Albert Museum in London to bring back Chhatrapati Shivaji Maharaj's legendary "Wagh Nakh" a formidable medieval weapon to the state.

The MoU states that the antique weapon will be handed over to the Government of Maharashtra on a loan basis for a period of three years, during which it will be displayed in museums across the state.

What is the 'Wagh Nakh'?

The 'wagh nakh,' literally translating to 'tiger claws,' is a unique medieval dagger used across the Indian subcontinent.

This fearsome weapon featured four or five curved blades affixed to a glove or a bar, designed for personal defence or stealth attacks.

Its sharp blades were capable of slicing through skin and flesh with ease.

Chhatrapati Shivaji's Defense with the 'Wagh Nakh':

Chhatrapati Shivaji faced Afzal Khan, a Bijapur general assigned to stop Shivaji's strong campaigns in the Konkan. Khan suggested a peaceful meeting, but Shivaji, anticipating danger, came prepared.

He concealed a 'wagh nakh' and wore chainmail (armour made from small metal rings) under his attire. When Khan attacked, Shivaji's 'wagh nakh' struck, resulting in Khan's death, ultimately securing Shivaji's victory.

- Titles:
- He took on the titles of Chhatrapati, Shakakarta, Kshatriya Kulavantas and Haindava Dharmodhhaarak.
- Administration under Shivaji:
- Central Administration:
- He established a centralised administration with a council of eight ministers (Ashtapradhan) who were directly responsible to him and advised him on various matters of the state.
- The Peshwa, also known as the Mukhya Pradhan, originally headed the advisory council of Raja Shivaji.
- Provincial administration:
- Shivaji divided his kingdom into four provinces. Each province was further divided into districts and villages. The village was the basic unit of administration and was governed by a Deshpande or Patel with the help of a village panchayat.
- Like the centre, there was a committee or council of eight ministers with Sar-i-'Karkun' or the 'prantpati' (Head of the province).
- Revenue Administration:
- Shivaji abolished the Jagirdari System and replaced it with the Ryotwari System, and made changes in the position of hereditary revenue officials which were popularly known as Deshmukhs, Deshpande, Patils , and Kulkarnis.
- Shivaji strictly supervised the Mirasdars who had hereditary rights in land.
- The revenue system was patterned on the Kathi system of Malik Amber in which every piece of land was measured by Rod or Kathi.
- Chauth and Sardeshmukhi were other sources of income.
- Chauth amounted to 1/4th of the standard that was paid to Marathas as a safeguard against Shivaji's forces raiding non-Maratha territories.

PRACTICE QUESTIONS

1) Consider the following statements, with reference to Elephant Corridor Report, 2023:
1. At present, there are totally 200 elephant corridors in India.
2. Karnataka has the most elephant corridors in India.
3. The elephant corridor in revenue lands and private lands are to be notified under the Wild Life (Protection) Act, 1972.
How many of the statements given above are correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (d)

Explanation: In the recently held standing committee meeting of the National Board for Wildlife, Raman Sukumar, an Indian ecologist and IISc professor said that multiple inconsistencies in the elephant corridor report, 2023. A corridor is a small patch of land that provides connectivity for elephant movement across habitats, largely within a landscape of the elephant reserve. According to the report there is increase of 62 'elephant corridors' in the country since 2010, bringing the total to 150, an increase of 40 %. West Bengal has the most elephant corridors (26) that amounts to 17% of the total elephant corridors. Elephants have seen increased presence in Madhya Pradesh found in Sanjay Tiger reserves and Bandhavgarh. The decrease in corridor use is attributed to the habitat fragmentation, shrinkage and destruction. The elephant corridor in forest areas shall be notified under the rules mentioned under the Wild Life (Protection) Act, 1972. The elephant corridor areas with revenue lands and private lands must be notified under the Environment (Protection) Act, 1986. Hence, all statements are not correct.

2) Consider the following statements, with reference to the National Efficient Cooking Programme:
1. It aims to promote affordable and energy-efficient coking coal.
2. It is an initiative of the Ministry of Petroleum and Natural Gas (MOPNG).
Which of the statements given above is/are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2
Solution: (d)

Explanation: Recently the Union Minister for Power and New & Renewable Energy unveiled the National Efficient Cooking Programme to revolutionize cooking practices in India. The National Efficient Cooking Programme (NECP) introduces induction-based cook-stoves, offering a cost advantage of 25-30% over traditional cooking methods. It aims to promote both energy savings and cost-effective cooking solutions by introducing affordable and energy-efficient induction-based cookstoves. It was launched by the Energy Efficiency Services Limited (EESL), which is under the Union Minister for Power and New & Renewable Energy. By deploying 20 Lakh Induction cook-stoves across India, EESL seeks to reduce the environmental impact of cooking methods, ensuring cleaner air and improved health for citizens. Hence, both statements are not correct.

3) With reference to Electoral Bonds, consider the following statements:

1. There is no limit to the number of electoral bonds that an individual or organization may purchase.

2. Registered political parties that received at least 1% of the vote in the most recent Lok Sabha or State Assembly elections can request a verified account from the Election Commission of

India (ECI).

3. Because the donor's name and other details are not recorded on the instrument, electoral bonds are referred to as anonymous.

Which of the above statements is/are not correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (c)

Explanation: Electoral bonds are interest-free bearer bonds or money instruments that firms and individuals in India can purchase from authorized State Bank of India (SBI) branches. A person or company may purchase an unlimited number of electoral bonds. Political parties that received at least 1% of the votes cast in the most recent Lok Sabha or State Assembly elections and are registered under the RPA are eligible for a verified account from the Election Commission of India (ECI). Because the donor's name and other details are not recorded on the instrument, electoral bonds are referred to as anonymous. Hence, all statements are correct.

4) Consider the following statements regarding River Dolphins:
1. The pink river dolphin, or boto, is another name for the Amazon River dolphin.
2. The Ganges River dolphin is the largest.
3. The Indus River dolphin population has declined significantly in recent years.
Which of the above statements is/are correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (a)

Explanation: River dolphins are a group of freshwater cetaceans that inhabit various river systems across Asia and South America. The Six Surviving River Dolphin Species include the Amazon, Ganges, Indus, Irrawaddy, Tucuxi, and Yangtze finless porpoises. The Amazon River dolphin is also known as the pink river dolphin or boto. Hence, statement 1 is correct.

The Ganges River dolphin has been recognized by the Government of India as its National Aquatic Animal. However, the Ganges River dolphin is not the largest river dolphin. The Amazon River dolphin is the largest river dolphin. Hence, statement 2 is not correct.

Recently, Conservation efforts in populated river basins like the Indus and Yangtze have seen success. For instance, the Indus River dolphin population in Pakistan doubled due to joint stakeholder action. Hence, statement 3 is not correct.

5) Consider the following statements regarding 'Border Adjustment Tax (BAT)':
1. BAT is a duty that is proposed to be imposed on imported goods in addition to the customs levy.
2. It imposes a charge on goods or services in accordance with the origin principle of taxation.
3. BAT aims to ensure a level playing field for both foreign and domestic companies operating within a tax jurisdiction.
How many of the above statements is/are correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (b)

Explanation: Border Adjustment Tax (BAT) is a duty that is proposed to be imposed on imported goods in addition to the customs levy that gets charged at the port of entry. Hence, statement 1 is correct.

BAT is a fiscal measure that imposes a charge on goods or services in accordance with the destination principle of taxation. Under this principle, a government taxes products based on the location of their sale to the final consumer rather than on the location of their production or origin. Hence, statement 2 is not correct.

Generally, BAT seeks to promote "equal conditions of competition" for foreign and domestic companies supplying products or services within a taxing jurisdiction. The World Trade Organisation (WTO) rules allow for the adjustment of certain types of internal taxes at the border under certain conditions. The main conditions are:

- The tax must be applied equally to imports and "like" domestic products.

- The tax must be "borne" by a product and not be "direct".

- A permitted border tax adjustment must not subsidize exports.

Hence, statement 3 is correct.

6) Consider the following statements, with reference to the WHO's Global Tuberculosis (TB) Report 2023:

1. In 2022, tuberculosis overtook Covid-19 as the largest cause of death from a single infectious pathogen.

2. In 2022, 30 high-burden TB nations will account for 87% of global TB cases, with India being one of them.

3. Despite being a high-burden country, India has a TB death rate of less than 5%.

How many of the above statements are correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (a)

Explanation: Recently, the World Health Organization (WHO) released the Global Tuberculosis (TB) Report 2023, highlighting the high burden of TB worldwide in 2022. It was the world's second leading cause of death from a single infectious agent in 2022, following Covid-19. Hence, statement 1 is not correct. TB caused almost twice as many deaths as HIV-AIDS. More than 10 million people continue to fall ill with TB every year. 30 high-burden TB countries collectively accounted for 87% of the world's TB cases in 2022. Among the top eight high-burden countries, besides India, are Indonesia, China, the Philippines, Pakistan, Nigeria, Bangladesh, and the Democratic Republic of Congo. Hence, statement 1 is correct. India reported a case fatality ratio of 12%, indicating that 12% of TB cases in the country resulted in death. The report estimates that 3,42,000 TB-related deaths occurred in India in 2022, with 3,31,000 among HIV-negative individuals and 11,000 among those with HIV. Hence, statement 3 is not correct.

7) Consider the following statements regarding Deepfake:

1. Deepfake generators and discriminators are components of generative adversarial networks.

2. Deepfakes can help restore people's lost voices, improve artistic expression, and improve medical training and simulation.

3. Sections 67 and 67A of the Information Technology Act (2000) contain laws that address all aspects of deep fakes.

How many of the above statements is/are correct?

a) Only one
b) Only two
c) All three
d) None
Solution: (b)

Explanation: Deepfakes are synthetic media that use AI to manipulate or generate visual and audio content, usually with the intention of deceiving or misleading someone. Deepfakes are created using a technique called generative adversarial networks (GANs), which involve two competing neural networks: a generator and a discriminator. The generator tries to create fake images or videos that look realistic, while the discriminator tries to distinguish between the real and the fake ones.

The generator learns from the feedback of the discriminator and improves its output until it can fool the discriminator. Hence, statement 1 is correct. Positive Applications of Deep Learning: Deep learning technology has enabled positive advancements, such as restoring lost voices and recreating historical figures. Deep learning techniques have been applied in comedy, cinema, music, and gaming to enhance artistic expression. It enhances medical training and simulation by generating diverse and realistic medical images. It also creates virtual patients and scenarios for simulating medical conditions and procedures, improving training efficiency. Hence, statement 2 is correct.

India does not have specific laws or regulations that ban or regulate the use of deepfake technology. India has called for a global framework for the expansion of "ethical" AI tools. Existing laws such as Sections 67 and 67A of the Information Technology (IT) Act (2000) have provisions that may be applied to certain aspects of deep fakes, such as defamation and publishing explicit material. The Information Technology Rules, 2021, mandate the removal of content impersonating others and artificially morphed images within 36 hours. None of the provisions or section of the IT Act 2000 deal with each and every aspect of the Deepfakes. Hence, statement 3 is not correct.

8) Consider the following statements, with reference to Pahari painting:

1. Pahari painting is a style of miniature painting that developed in the independent states of the Himalayan foothills in India.

2. The roots of the miniature painting tradition traces back to the Buddhist Pala dynasty.

3. Pahari paintings are confined to religious epics such as Mahabharat and Ramayana, Puranas, and Gita.

How many of the statements given above are correct?
a) Only one
b) Only two
c) All three
d) None
Solution:(b)

Explanation: Pahari denotes 'hilly or mountainous' in origin. Pahari painting is a style of miniature painting that developed in the independent states of the Himalayan foothills in India. The roots of the miniature painting tradition go back to the Buddhist Pala dynasty, which ruled Bengal and Bihar from the 8th century until the end of the 11th century. Pahari paintings demonstrate challenges in their territorial classification. Pahari paintings featured both religious and secular subjects. Detailed paintings based on religious epics such as Mahabharat and Ramayana, Puranas, and Gita were frequently painted in the style. Basohli painting is a school of Pahari miniature painting that flourished in the Indian hill states during the late 17th and the 18th centuries, known for its bold vitality of colour and line. Miniature painting also flourished in the Deccan region between the 16th and

19th centuries. Hence, statement 3 is not correct.

9)Consider the following statements, with reference to PM Janjati Adivasi Nyaya Maha Abhiyan:

1. It aims to ensure last-mile welfare scheme delivery and protection for Particularly Vulnerable Tribal Groups (PVTGs).
2. Under the scheme, monthly cash assistance will be provided for tribal children's education.
Which of the above statements given above is/are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2
Solution: (a)

Explanation: PM Janjati Adivasi Nyaya MahaAbhiyan aims to ensure holistic development of tribal groups. It is meant to ensure last-mile welfare scheme delivery and protection for Particularly Vulnerable Tribal Groups (PVTGs). The scheme aims to benefit and saturate the families and habitations with basic facilities. It is a 24,000-crore project for vulnerable tribal groups. It was launched by the Prime Minister Shri Narendra Modi on the occasion of Janjatiya Gaurav Diwas (Tribal Pride Day). Modi also launched the Visksit Bharat Sankalp Yatra, a nationwide programme to reach out to all villages and include those eligible for various central schemes. Hence, statement 2 is not correct.

10) Consider the following statements, with reference to Public Safety Act (PSA), 1978:

1. It is a preventive detention law where a person can be held under preventive detention for up to two years.
2. The Act extents to all over India.
3. Article 22(a) of the Constitution states that no person who is arrested shall be detained in custody without being informed.
How many of the statements given above are not correct?
a) Only one
b) Only two
c) All three
d) None
Solution: (d)

Explanation: Public Safety Act (PSA), 1978 is also called as The Jammu And Kashmir Public Safety Act, 1978. The act extents only to the state of Jammu and Kashmir. It is a preventive detention law where a person can be held under preventive detention for --up to two years. It is very similar to the National Security Act that is used by other state governments for preventive detention. A person can be detained for the following reasons:

- Threat to the maintenance of the public order to the state.

- Smuggling or abetting the smuggling of liquor.

- Engaging in transporting or concealing or keeping smuggled liquor.

When a person is detained under the PSA, the District Magistrate or Divisional Commissioners communicates the reason for the detention in writing, within 5 days. In exceptional circumstances, the DM can take 10 days to communicate these grounds. Article 22(a) of the Constitution states that no person who is arrested shall be detained in custody without being informed. Hence, statement 2 is not correct.

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

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The Indian Express
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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

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