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Varthaman

MONTHLY CURRENT AFFAIRS MAGAZINE
BY RV TRAINING ACADEMY



SOVEREIGN ARTIFICIAL INTELLIGENCE

India's endeavor to establish its own 'sovereign AI' entails the nation's commitment to develop, control, and utilize artificial intelligence (AI) technologies on a national scale.

- + APPOINTMENT OF HIGH COURT JUDGES
- + RBI MONETARY POLICY UPDATE
- + PAAT-MITRO
- + PANCHAYAT DEVELOPMENT INDEX

CURRENT AFFAIRS
& PRACTICE QUESTIONS

ADMISSIONS OPEN

NEW BATCH STARTS
JANUARY 2024

COURSE HIGHLIGHTS

- BASIC NCERT FOUNDATION
- PRELIMS CLASSES
- WEEKLY CURRENT AFFAIRS
- MAINS UPGRADATION
- ANSWER WRITING PRACTICE
- PERSONALISED MENTORING
- STUDY MATERIALS

Eminent Personality



Lachit Borphukan

Recently, the Prime Minister of India paid tribute to Lachit Borphukan on Lachit Diwas.

About Lachit Borphukan:

He has been revered in Assam as the warrior who defeated Mughal armies in the ***Battle of Saraighat in 1671.***

He was the commander of the Ahom armies during the battle of Saraighat and fought on the banks of the Brahmaputra in Guwahati.

He was a brilliant military commander.

He was chosen as one of the five Borphukans of the Ahom kingdom by King Charadhwaj Singha and given administrative, judicial, and military responsibilities.

Borphukan preferred guerrilla tactics, which provided an edge to his smaller but fast-moving and capable forces.

He died a year after the Battle of Saraighat from a long-festering illness.

Key points about the AHOM Kingdom

The Ahom kings ruled large parts of what is now known as Assam for nearly 600 years, from the early 13th century to the early 19th century.

This was a prosperous, multi-ethnic kingdom that spread across the upper and lower reaches of the Brahmaputra valley, surviving on rice cultivation in its fertile lands.

The Ahoms engaged in a series of conflicts with the Mughals from 1615-1682, starting from the reign of Jahangir until the reign of Aurangzeb.

BURNING ISSUES

ESMA

- The Odisha government invoked the Orissa Essential Services (Maintenance) Act (ESMA) on December 6, 2023, to prohibit strikes by paramedical staff in the state.

Details

- The Odisha Government has invoked the Orissa Essential Services (Maintenance) Act (ESMA), which prohibits strikes by paramedical staff, including nurses, pharmacists, technicians, and Class III and IV employees in the Health Department. This move aims to ensure that medical services are not disrupted.
- According to the State Health Department, the order imposing ESMA and prohibiting strikes will be in force for six months from December 6.
- The decision to invoke ESMA is to prevent strikes in the form of work stoppages by employees associated with medical services in the state, ensuring uninterrupted healthcare services for the population.
- The prohibition order covers staff working at municipality hospitals, ESI hospitals, Acharya Harihar Regional Cancer Centre in Cuttack, Regional Spinal Injury Centre in Cuttack, jail hospitals, and police hospitals.

Essential Services Maintenance Act (ESMA)

- The Essential Services Maintenance Act (ESMA) is a pivotal legislation enacted in 1968 to safeguard the delivery of essential services crucial for public welfare and national security.
- Initially, different states had their versions of this Act, causing disparities in its implementation. ESMA aimed to standardize and create a uniform framework across the nation.

Key Features of ESMA

- **Prohibition of Strikes:** ESMA grants the government the authority to forbid strikes in essential services for a specified duration, typically around six months. This can be enforced through notifications issued by the central or state government.
- **Defining Essential Services:** The Act defines "essential services" as those vital for maintaining public order, safety, and health. This encompasses services like transportation, communication, power generation and distribution, banking, and sanitation.
- **Penalties for Violations:** Individuals or groups participating in strikes in essential services can face imprisonment or fines. Additionally, property used for organizing or supporting such strikes can be confiscated as per the Act.

Significance of ESMA

- **Continuity of Essential Services:** ESMA plays a critical role in ensuring the uninterrupted functioning of essential services during periods of labour disputes. This prevents disruptions that could significantly inconvenience the public.
- **Promotion of Industrial Peace:** By providing a structured framework for resolving disputes through negotiation and arbitration, ESMA fosters dialogue between employers and employees. This promotes industrial peace and stability.
- **Protection of Public Interest:** ESMA prioritizes the public interest over the right to strike in crucial sectors, safeguarding citizens' basic needs and well-being.

Table of Contents

Polity and Governance

- National Judicial Data Grid (NJDG) portal 07
- 14 Opposition MPs suspended 07
- Appointment of High Court Judges 08
- National Human Rights Commission (NHRC) 08
- Section 34 of IPC 09
- UNLF Peace Deal 10
- Tribunals in India 11

Government Schemes and Bills

- Amplifi 2.0 Portal 11
- GRAM MANCHITRA 11
- Project PRAYAS 12

Indian Economy

- Supplementary Grants 13
- First Entity to List on Social Stock Exchange 13
- RBI monetary policy update 14
- Need to regulate digital lending Illegal lending apps in India 14
- Real Estate Investment Trusts (REITs) 15

Environment and Ecology

- Santjordia pagesi 15
- Highlights of Prime Minister Speech at the COP28 15
- Green Rising Initiative 17
- Kunming - Montreal Global Biodiversity Framework (KMGBF) 17

Agriculture

- Unseasonal Rains and Lightning in Gujarat 18
- Lakadong Turmeric 18
- Press mud 19

Geography

- Golan Heights 20
- Donkey Route 21
- Tropical Cyclone Jasper 22
- Satpura National Park 23
- Ghaggar River 24
- Yellow Sea 24
- Green Turtle 25
- Wheeler Island 25
- Cyclone Michaung 25

International Relations

- Conference on Disarmament 26
- International Maritime Organisation (IMO) 26
- 8th Wonder of The World 28
- Exercise Surya Kiran- XVII 28

Science and Technology

- PAAT-MITRO 29
- INS Tarmugli 30
- Karrar Combat Drones 30
- Buoy 30
- National Automated Fingerprint Identification System (Nafis) 31
- Voice over 5G (Vo5G) 32
- Sovereign Artificial Intelligence 32
- Defence Acquisition Projects 34
- INS Kadmat 35

Reports and Indices

- The GDP Surprise: India on the Up and Up 35
- The LEADS [Logistics Ease Across Different States] 2023 Report 36
- India Skills Report 36
- The Global Climate 2011-2020: A Decade of Acceleration 37
- Panchayat Development Index 37

Table of Contents

Indian Society/Social Issues and justice/ Culture

- Kambala Race 38
- Hatti community 39

Personality in News

- Shri Atal Bihari Vajpayee 40

PRACTICE QUESTIONS 41



BURNING ISSUES

PROCLAMATION ON 1949

- The Proclamation of 1949 by Yuvraj Karan Singh was a significant document that played a role in the Supreme Court's judgment upholding the abrogation of Article 370.
- In post-judgment statements, the court emphasized that the proclamation of 1949 was issued for the country's and the state's benefit. It was seen as a necessary step to remove any ambiguity and to align Jammu and Kashmir's constitutional framework with that of the newly-formed Republic of India.
- The Supreme Court, in its judgment, referred to the Proclamation of 1949 as a significant legal document. It argued that with the issuance of the proclamation, paragraph 8 of the Instrument of Accession ceased to have legal consequences, implying that the state had effectively surrendered its sovereignty.

Repeal of the Government of India Act 1935

- The proclamation explicitly stated that the Government of India Act 1935, which governed the constitutional relationship between Jammu and Kashmir and the Dominion of India, would be repealed. This indicated a clear break from the existing constitutional arrangement.

Adoption of the Indian Constitution

- Karan Singh declared that the Constitution of India, then in the process of being adopted by the Constituent Assembly of India, would

govern the relationship between Jammu and Kashmir and the Union of India.

- He affirmed that the provisions of the Indian Constitution would be enforced in Jammu and Kashmir by him, his heirs, and his successors.

Superseding and Abrogation of Inconsistent Constitutional Provisions

- The proclamation explicitly stated that the provisions of the Indian Constitution would supersede and abrogate all other constitutional provisions inconsistent with it that were in force in the state at that time.

Full and Final Surrender of Sovereignty

- The critical phrase used in the proclamation was the "full and final surrender of sovereignty." This indicated an unambiguous commitment by the leadership of Jammu and Kashmir, represented by Yuvraj Karan Singh, to surrender the state's sovereignty to India.

Ambiguity Resolution

- Karan Singh, in later statements, explained that the proclamation was issued to eliminate any ambiguity regarding Jammu and Kashmir's status. There was uncertainty about whether the state had become an integral part of India after Hari Singh, Karan Singh's father, signed the Instrument of Accession.

Acceptance of the Indian Constitution's Supremacy

- The Proclamation reflected a clear acceptance of the supremacy of the Indian Constitution. By stating that the Constitution of India would govern the relationship, it acknowledged the legal framework and principles outlined in the Indian Constitution.
- Karan Singh's Proclamation of 1949 served as a foundational document that clarified and affirmed the integration of Jammu and Kashmir with the Union of India. The Supreme Court, in upholding the abrogation of Article 370, relied on this proclamation as evidence of the state's full and final surrender of sovereignty to India under the Indian Constitution

POLITY AND GOVERNANCE

NATIONAL JUDICIAL DATA GRID (NJDG) PORTAL

- The NJDG portal is a national repository of data relating to cases instituted, pending, and disposed of by the courts across the length and breadth of the country.
- In this portal, one may access case-related information and statistics such as institution, pendency, disposal of cases, case types, and the year-wise break-up of the Supreme Court of India.
- It is a database of orders, judgements, and case details of 18,735 District & Subordinate Courts and High Courts created as an online platform under the e-Courts Project.
- It has been developed by the National Informatics Centre (NIC) in close coordination with the in-house software development team of the Computer Cell, Registry with an interactive interface and analytics dashboard.
- The entire database will be periodically updated on the NJDG portal.
- NJDG works as a monitoring tool to identify, manage & reduce the pendency of cases.
- It helps to provide timely inputs for making policy decisions to reduce delays in disposing of cases and reduce case pendency.

14 OPPOSITION MPs SUSPENDED

- 14 opposition MPs (13 from the Lok Sabha and one from the Rajya Sabha) were suspended after they protested against a security breach in the parliament.
- The security breach occurred when two intruders entered the House chamber from the visitor gallery during Zero Hour on the 22nd anniversary of the Parliament terror attack (December 13, 2001).

The factors that contributed to the recent Lok Sabha security breach were:

- Fewer security staff,
- Reduced height of the visitors' gallery from the House floor in the new Parliament building,
- An increase in the number of visitors and shoes not being checked.

- The MPs were suspended for unruly conduct. They have been suspended for the remainder of the winter session or Parliament.
- Suspension of MPs – About, corresponding rules, court's intervention
- It is the role and duty of the Presiding Officer – Speaker of Lok Sabha and Chairman of Rajya Sabha – to maintain order so that the House can function smoothly.
- In order to ensure that proceedings are conducted in the proper manner, the Speaker/Chairman is empowered to force a Member to withdraw from the House.

Rules under which the Presiding Officer/Chairman acts

- For Lok Sabha
- Rule Number 373 of the Rules of Procedure and Conduct of Business
- It empowers presiding officers to direct an MP to withdraw from the House for any disorderly conduct.
- This rule says that any Member so ordered to withdraw shall remain absent during the remainder of the day's sitting.
- Rules 374 and 374A- To deal with more recalcitrant Members.
- Rule 374 empowers the Presiding officers to name the legislators if the MP continues disrupting the House even after repeated warnings.
- After that, the House can move a motion to suspend the MP for a period not exceeding the remainder of the session
- Rule 374A was incorporated in the Rule Book in December 2001. The intention was to circumvent the necessity of adopting a motion for suspension.
- Under this rule, the Speaker can name an MP, who shall then automatically stand suspended for five days or the remaining part of the session.

For Rajya Sabha

Rule 255 of the Rule Book of Rajya Sabha

- It empowers the Chairman of Rajya Sabha to direct any Member to withdraw immediately from the House for any disorderly conduct.
- Rule 256
- This rule empowers the Chairman to name the members who persistently disregards

the authority of the Chair or abuses the rules of the Council.

- After that, the House may adopt a motion suspending the Member for a period not exceeding the remainder of the session.
- It should be noted that, unlike Lok Sabha (under rule 374A), Rajya Sabha can not suspend its members without passing a motion for the same.

Can courts intervene in a matter of suspension of MPs?

- Article 122 of the Indian Constitution says parliamentary proceedings cannot be questioned before a court.
- In some cases, however, courts have intervened in the procedural functioning of legislatures.
- For example, the Maharashtra Legislative Assembly passed a resolution in its 2021 Monsoon Session suspending 12 BJP MLAs for a year.
- The matter came before the Supreme Court, which held that the resolution was ineffective in law beyond the remainder of the Monsoon Session.

APPOINTMENT OF HIGH COURT JUDGES

- Under Article 217 of the Constitution of India, the President appoints High Court judges.
- The Chief Justice of a High Court is appointed by the President after consultation with the Chief Justice of India (CJI) and the Governor of the state concerned.
- For appointment of other judges, the Chief Justice of the concerned High Court is also consulted.
- This consultation process has been interpreted by the Supreme Court in the Third Judges case (1998) in the following manner:
- The CJI has to consult a collegium of two senior-most judges of the Supreme Court.
- After consultation, the CJI recommends names to the President for appointment.
- The President, in case of objection, can send the recommended names back to the collegium, to reconsider, with reasons in writing.
- After reconsideration, if the collegium reiterates its recommendations, the President has to appoint the recommended names as Judges.

- Transfer of Judges:
- Currently, the President can transfer a judge from one High Court to another, after consulting the Chief Justice of India.

NATIONAL HUMAN RIGHTS COMMISSION (NHRC)

- The Central Government recently appointed seven people, including a former Delhi police commissioner, as 'special monitors' of the National Human Rights Commission (NHRC).
- About National Human Rights Commission (NHRC):
- It is a statutory body established in 1993, under the Protection of Human Rights Act, 1993.
- It is the watchdog of human rights in the country.
- It was established in conformity with the Paris Principles (1991), adopted at the first international workshop on national institutions for the protection of human rights.

Objectives:

- To strengthen the institutional arrangements through which human rights issues could be addressed in their entirety in a more focused manner.
- To look into allegations of excesses, independently of the government, in a manner that would underline the government's commitment to protect human rights.

Composition:

- It includes a Chairperson and eight other members.
- The Chairperson of NHRC is the retired Chief Justice of India.
- Out of the eight members, four are full-time members, whereas the other four are deemed members.

Out of the 4 full time members of the NHRC:

- One member should be a working or retired Judge of the Supreme Court.
- Other member should be working or retired Chief Justice of a High Court.
- Two members are selected based on their experience and knowledge of human rights.
- The 4 deemed members of NHRC are the

Chairpersons of the National Commission for Minorities, the National Commission for Scheduled Castes, the National Commission for Scheduled Tribes and the National Commission for Women.

- The Chairperson and members are appointed by the President on the recommendations of a six-member committee consisting of –
- Prime Minister as its head Speaker of the Lok Sabha
- Deputy Chairman of the Rajya Sabha
- Leaders of the Opposition in both the Houses of Parliament
- Union Home Minister
- Term: The Chairperson and members are appointed for a term of 3 years or till the age of 70 years, whichever is earlier.
- The chairperson and members are eligible for reappointment.

Functions of the NHRC:

- Inquire, on its own initiative or on a petition presented to it by a victim or any person on his behalf, into a complaint of violation of human rights, or abetment or negligence in the prevention of such violation, by a public servant;
- Intervene in any proceeding involving any allegation of violation of human rights pending before a court with the approval of such court;
- Visit any jail or any other institution under the control of the State Government, where persons are detained or lodged for purposes of treatment, reformation or protection to study the living condition of the inmates and make recommendations thereon;
- Spread human rights literacy among various sections of society;
- Study treaties and other international instruments on human rights and make recommendations for their effective implementation;

Powers:

- While inquiring into complaints under the Act, the Commission shall have all the powers of a civil court trying a suit under the Code of Civil Procedure, 1908.
- It can summon and enforce the attendance of witnesses and examine them on oath.

- It can also grant compensation to the victims of police brutality.
- If necessary, the NHRC can approach the Supreme Court or the High Court for the enforcement of human rights in order to protect the rights of individuals or groups.
- The NHRC has the authority to take "suo motu" cognizance of human rights violations, even if a formal complaint has not been filed.

SECTION 34 OF IPC



- The recent Supreme Court clarification on Section 34 of the Indian Penal Code underscores that common intention requires shared purpose and design among all co-accused, without mandating explicit discussions, allowing for its psychological emergence before or during the crime.

Section 34 of the Indian Penal Code (IPC)

- Section 34 of the Indian Penal Code (IPC) is a provision that deals with the criminal liability of several persons who act in furtherance of a common intention.
- It states that when a criminal act is done by several persons in furtherance of the common intention of all, each of such persons is liable for that act in the same manner as if it were done by him alone.
- This means that if two or more people commit a crime together with a shared purpose, they can be held equally responsible for the crime, regardless of their roles or actions. For example, if A and B plan to rob C and in the course of the robbery, A kills C, then both A and B can be charged with murder under Section 34 IPC.
- The rationale behind this provision is to deter people from joining criminal gangs or conspiracies and to punish them for their collective guilt. It also reflects the principle that the act of one is the act of all when they

have a common intention.

Summary

- Section 34 IPC is an important provision because it helps to bring justice to the victims of crimes committed by several persons. It also helps to prevent people from escaping liability by claiming ignorance or innocence of their co-accused's actions. It ensures that everyone who participates in a criminal act with a common intention is held accountable for it.

UNLF PEACE DEAL

- The United National Liberation Front (UNLF), Manipur's oldest valley-based armed group, has signed a peace agreement with the central and state governments.

Details

- On November 29, 2023, the Government of India, the Government of Manipur, and the UNLF signed a peace agreement in New Delhi. The agreement is a significant milestone in the pursuit of peace in the Northeast region of India.
- The UNLF Peace Agreement is a significant milestone in the pursuit of peace in Manipur and the broader Northeast region. It represents the commitment of the UNLF to embrace peace, the government's dedication to conflict resolution, and the establishment of mechanisms to ensure sustainable peace and development.

Historical Background

- The UNLF is a prominent insurgent group that emerged in 1964 as a result of the political and social grievances of the Manipuri people.
- The group has been involved in armed resistance against the Indian state, both within and across the borders. The prolonged conflict has caused human rights violations, violence and instability, affecting the lives of the people in the region.
- The UNLF claims to represent the aspirations of the Manipuri people for self-determination and sovereignty.

Government's Approach

- The North East region of India has witnessed several conflicts and insurgencies over the years, which have hampered its development and security. The Indian government has

been committed to resolving these issues through dialogue and development.

- The government has adopted a holistic approach that involves engaging with various armed groups, addressing their grievances and aspirations, and providing them with opportunities to join the national mainstream.
- The government has also launched several schemes and projects to boost the region's infrastructure, connectivity, education, health, tourism, and culture, thereby creating a conducive environment for peace and prosperity.

Key Points of the Peace Agreement

Renunciation of Violence

- The UNLF has agreed to abandon violence and join the mainstream.
- This signifies a major shift from their militant past and marks a commitment to peaceful resolution.
- The UNLF will honour the Constitution of India and the laws of the land, embracing democratic processes.

Conflict Resolution and Development

- The agreement aims to end hostilities that have claimed lives on both sides for over 50 years.
- It provides an opportunity to address the longstanding concerns of the Manipuri community.
- This opens doors for development, socio-political progress, and addressing grievances.

Government's Role

- Senior officials from the Union Home Ministry and the Government of Manipur actively participated in reaching this agreement.
- This demonstrates the government's commitment to facilitating peace processes and conflict resolution in the region.
- Their involvement ensures coordinated efforts and support for the peace initiative.

Peace Monitoring Committee (PMC)

- A PMC will be established to oversee the implementation of the agreement and enforce agreed-upon ground rules.
- This ensures accountability and compliance from all parties involved.

- The PMC will aim to maintain peace and order, fostering trust and transparency.

Impact and Future Prospects

- **Restoration of Peace:** The agreement is expected to contribute significantly to restoring peace and normalcy in Manipur, reducing hostilities between armed groups and security forces.
- **Encouraging Participation:** The UNLF's return to the mainstream may encourage other valley-based armed groups to consider participating in peace processes, potentially leading to broader conflict resolution initiatives in the future.
- **Development Opportunities:** With reduced conflicts, there's a possibility of enhanced development initiatives, economic growth, and improved living conditions for the people in Manipur.

TRIBUNALS IN INDIA

- The Supreme Court recently clarified that tribunals functioning under the strict parameters of their governing legislation cannot direct the government to make policy.

About Tribunals:

- Tribunals are judicial or quasi-judicial institutions established by law.
- They intend to provide a platform for faster adjudication as compared to traditional courts, as well as expertise on certain subject matters.
- It performs a number of functions, like adjudicating disputes, determining rights between contesting parties, making an administrative decision, reviewing an existing administrative decision, and so forth.

Constitutional Recognition:

- The 42nd Amendment Act, 1976, inserted Articles 323-A and 323-B.
- Article 323A empowers Parliament to constitute administrative Tribunals (both at the central and state levels) for adjudication of matters related to the recruitment and conditions of service of public servants.
- Article 323B specifies certain subjects (such as taxation and land reforms) for which Parliament or state legislatures may constitute tribunals by enacting a law.

GOVERNMENT SCHEMES AND BILLS

AMPLIFI 2.0 PORTAL

- Recently, the Union Ministry of Housing and Urban Affairs launched the Amplifi 2.0 portal.

About the Amplifi 2.0 Portal:

- Amplifi (Assessment and Monitoring Platform for Liveable, Inclusive, and Future-Ready Urban India) portal aims to provide data on Indian cities.
- It is making raw data from Indian cities available on a single platform for academics, researchers, and stakeholders to help data-driven policymaking.
- Currently, 258 urban local bodies (ULB) have been on-boarded, and data for 150 cities is available on the portal.
- It provides data on a range of information for several cities, including, for example, the total diesel consumption and the number of samples tested for water quality.

What is the Urban Outcomes Framework 2022?

- It has been developed for the Ministry by the National Institute of Urban Affairs and PWC India.
- It shifts the focus from the indices to the data with a comprehensive list of indicators.
- With this, data across 14 sectors is streamlined to increase focus on data collection, and disaggregated data can be analysed by domain experts.
- The initiative also provides the opportunity to create new frameworks on open data.
- The 14 sectors are – demography, economy, education, energy, environment, finance, governance, health, housing, mobility, planning, safety and security, solid waste management, and water and sanitation.

GRAM MANCHITRA

- The Gram Manchitra initiative aims to empower Gram Panchayats for effective spatial planning at the grassroots level, as announced by the Union Minister of State for Panchayati Raj in Lok Sabha.

Gram Manchitra Application

- The primary goal of the Gram Manchitra application is to empower Gram Panchayats with a robust platform for spatial planning, leveraging geospatial technology.

Functionalities

- **Unified Geo-Spatial Platform:** The application serves as a centralized platform for Gram Panchayats to visualize and plan developmental works across multiple sectors. This includes infrastructure development, natural resource management, sanitation, agriculture, and more.
- **Decision Support System:** Gram Manchitra provides various planning tools that utilize GIS technology. These tools aid Gram Panchayat officials in devising practical and achievable development plans. Some of these tools include:
 - **Identification of Potential Sites:** By utilizing geographic data, the application helps in identifying optimal locations for new development projects.
 - **Asset Tracking:** The application facilitates tracking and management of assets through geo-tagging, ensuring transparency and effective utilization of resources.
 - **Cost Estimation:** Tools are available to estimate the costs associated with different projects, aiding in budgeting and resource allocation.
 - **Impact Assessment:** Allows assessment of the potential impact of proposed projects on the local community and environment.

mActionSoft Mobile-Based Solution

- Complementing Gram Manchitra, mActionSoft is a mobile-based solution designed to capture photos with geo-tags (GPS Coordinates) specifically for works where assets are created as outputs.

Geo-Tagging Process

- **Three-Stage Geo-Tagging:** The mobile application enables the geo-tagging of assets at three crucial stages of development projects: before the commencement of work, during the work progress, and upon completion of the work.
- **Asset Repository:** This initiative helps create a comprehensive repository of information related to various developmental works, such as natural resource management,

water harvesting, sanitation, agriculture, etc. It ensures a detailed record of assets and their development stages.

Integration with Gram Manchitra

- The assets geo-tagged using mAction-Software seamlessly integrated into the Gram Manchitra application. This integration enhances the visual representation and mapping of various developmental works within Gram Panchayats.

Geo-Tagging Finance Commission Funded Assets

- Assets created under the finance commission funds are geo-tagged using photographs by the respective Panchayats.
- The GIS data of these geotagged assets can be visualized on the map of the Panchayat within the Gram Manchitra application.

PROJECT PRAYAS

- Recently, the International Organisation E Migration (IOM) launched Project PRAYAS to help Indian workers and students migrate in a secure, orderly, and regular manner.

About Project PRAYAS:

- Promoting Regular Assisted Migration for Youth and Skilled Professionals (PRAYAS) was launched in partnership with the Ministry of External Affairs (MEA).
- It is one of the first attempts to consolidate all the state-level initiatives for safe, orderly, and well-managed international migration.
- Goal: To facilitate safe, orderly, and regular migration for aspiring Indian migrant workers and students through policy recommendations in collaboration with the MEA and state governments, thus strengthening international migration governance.
- It aims to undertake a study, capturing the key migration trends, the needs and aspirations of migrants, and the major international migration and mobility initiatives taken by the union, as well as the state governments sharing the analysis with the ministry.
- Headquarters: Geneva, Switzerland.

INDIAN ECONOMY

SUPPLEMENTARY GRANTS

- The Supplementary Demands for Grants are likely to see additional allocations for fertiliser, food, and fuel subsidies, along with the Rural Employment Guarantee Scheme.

About Supplementary Grants:

- Article 115 of the Indian Constitution provides for supplementary, additional, or excess grants.
- When grants, authorised by the Parliament, fall short of the required expenditure, an estimate is presented before the Parliament for Supplementary or Additional grants.
- These grants are presented and passed by the Parliament before the end of the financial year.
- When actual expenditure incurred exceeds the approved grants of the Parliament, the Ministry of Finance and Ministry of Railways present a Demand for Excess Grant.
- The Comptroller and Auditor General of India bring such excesses to the notice of the Parliament.
- The Public Accounts Committee examines these excesses and gives recommendations to the Parliament.
- The Demand for Excess Grants is made after the actual expenditure is incurred and is presented to Parliament after the end of the financial year in which the expenses were made.

FIRST ENTITY TO LIST ON SOCIAL STOCK EXCHANGE

- Unnati Foundation, a not-for-profit organization (NPO) dedicated to empowering underprivileged youth through skill training and employment placement, has made history as the first entity to list on the National Stock Exchange's Social Stock Exchange (SSE) in India.

Impact on Unnati Foundation (SUF)

Fundraising for Social Impact

- Through the issuance of Zero Coupon Zero Principal (ZCZP) instruments, SUF raised

₹1.8 crore. This funding will be directed toward training 10,000 underprivileged youths across states, aiming to facilitate their employment.

- This method of fundraising bypasses traditional grants and donations, presenting a sustainable and scalable approach to financing social initiatives.

Enhanced Credibility and Transparency

- Listing on the SSE provides SUF with a platform to showcase financial and social accountability.
- Transparency in fund utilization and reporting builds trust among potential donors and investors, potentially attracting more substantial and longer-term funding.

Impact Measurement and Reporting

- SSE's requirement for annual impact reports, audited by social audit firms, ensures that SUF's social impact is measured and documented.
- This data-driven approach allows stakeholders to track the effectiveness of their contributions, holding SUF accountable for its social mission.

Social Stock Exchange (SSE)

- The Social Stock Exchange (SSE) is a specialized platform within a larger stock exchange that allows social enterprises and non-profit organizations (NPOs) to raise capital through the issuance of Zero Coupon Zero Principal (ZCZP) instruments.
- Unlike traditional stock exchanges where companies issue shares or debt to raise capital, ZCZPs are non-tradable instruments with a face value of ₹1 each.
- Donors receive these ZCZPs in their demat accounts as a symbolic representation of their contribution to the NPO's social cause.
- NPOs that meet the SSE's eligibility criteria can list their ZCZP offerings on the platform. Investors can then purchase these ZCZPs through their demat accounts.
- The funds raised are used by the NPO to implement its social projects. At the end of the project period, the ZCZPs expire and hold no monetary value. However, donors have the satisfaction of knowing that their contribution has helped make a positive social impact.

RBI MONETARY POLICY UPDATE

- The Reserve Bank of India's Monetary Policy Committee (MPC) kept the repo rate unchanged for the fifth time in a row at 6.5 per cent.
- While announcing various steps, RBI also said that it will lay down guidelines for web aggregators of loan products to bring more transparency to digital lending.
- Digital lending is the process of availing credit online.
- It involves lending through web platforms or mobile apps, utilising technology in customer acquisition, credit assessment, loan approval, disbursement, recovery and associated customer service.
- Its increased popularity amongst new-age lenders can be attributed to expanding smartphone penetration, credit range flexibility and speedy online transactions.
- It includes products like Buy Now, Pay Later (BNPL), which is a financing option (or simply a short-term loan product).
- BNPL allows one to buy a product or avail a service without having to worry about paying for it immediately.

NEED TO REGULATE DIGITAL LENDING ILLEGAL LENDING APPS IN INDIA

- A report by the RBI, published in 2022, says that India has the maximum number of digital loan apps in the world.
- The report has marked 600 loan apps illegal.
- Low-income and financial unsavvy Indians are the targets.
- These apps mostly lend small sums between Rs 2,000 and Rs 10,000, targeting low-income and financial unsavvy Indians.
- These loans come with huge interest rates and extortionate terms and conditions, to which borrowers have no recourse.
- This increases the vulnerabilities of these borrowers by exploiting the unmet need for credit.

Harassment by recovery agents

- Such apps are dangerous as the harassment by recovery agents have driven many to suicide in the recent past.
- In 2021, at least six people committed suicide

in Hyderabad alone due to harassment by agents.

Breach of privacy

- With just one tap, borrowers allow these lenders to access everything on their phone. The lender also get access to information such as PAN and Aadhar details.
- The apps, on the pretext of advancing a loan, obtain all information from the customers' phones which could later be used by the company to perpetrate some other financial crime.

Acts as a tool for money laundering

- More than a hundred apps related to loans, betting and dating successfully collected thousands of crores in revenue and repatriated them to China.
- This was revealed an investigation conducted by the Enforcement Directorate (ED).

Steps taken by to regulate digital lending

- RBI has been designated as the nodal department for dealing with complaints against unauthorised digital lending platforms as well as mobile apps.
- In August 2022, RBI issued the first set of guidelines for digital lending in order to combat illegal activities by certain players.
- These guidelines were issued in response to the recommendation of the Working Group on Digital Lending (WGDL).
- In September 2023, Union Finance Minister chaired a meeting with appropriate officials and launched a multi-agency crackdown on illegal loan apps.
- To curb the menace of illegal loan apps, the RBI has been asked to prepare a 'whitelist' of legal loan apps.
- At the same time, MEITY has been tasked with ensuring only such legal applications (list prepared by RBI) are available on app stores.
- The RBI has been entrusted to ensure that the registration of payment aggregators be completed within a time frame.
- A payment aggregator acts as a third party responsible for managing and processing merchants' online transactions.
- The RBI has also been entrusted with monitoring 'mule or rented' accounts that

may be used for money laundering.

- RBI has further been asked to review and cancel dormant non-banking finance companies (NBFCs) to avoid their misuse by such app operators.

REAL ESTATE INVESTMENT TRUSTS (REITS)

- The SEBI Board recently approved amendments to the SEBI (Real Estate Investment Trusts) Regulations 2014 (REIT Regulations) to create a new regulatory framework for small and medium REITs.

About Real Estate Investment Trusts (REITs):

- A REIT is a company that owns and typically operates income-producing real estate or related assets.
- They pool money from the investors and invest it in commercial real estate projects.
- These may include office buildings, shopping malls, apartments, hotels, resorts, self-storage facilities, warehouses, and mortgages or loans.
- Unlike other real estate companies, a REIT does not develop real estate properties to resell. Instead, a REIT buys and develops properties primarily to operate them as part of its own investment portfolio.
- REITs provide a way for individual investors to earn a share of the income produced through commercial real estate ownership without actually having to go out and buy commercial real estate.
- In general, REITs specialise in a specific real estate sector. However, diversified and speciality REITs may hold different types of properties in their portfolios, such as a REIT that consists of both office and retail properties.
- Most REITs are publicly traded like stocks, which makes them highly liquid (unlike physical real estate investments). REITs are like shares that are listed on the stock exchange, which means you can buy or sell them anytime on the exchange.

ENVIRONMENT & ECOLOGY

SANTJORDIA PAGESI



- Scientists discovered the rare St. George's cross medusa jellyfish near a Japanese volcanic crater in 2002. Now they have confirmed it is a new species altogether.
- It has been named as Santjordia pagesi.
- Santjordia pagesi is considered large at 4 inches wide and 3 inches tall, boasts a circular body with around 240 tentacles.
- Its most distinctive feature is a bright red, cross-shaped stomach.
- Its transparent body, resembles a cushion, with a thick white ring and vein-like structures.
- The jellyfish, found at depths of 2,700 to 2,800 feet in the Sumisu Caldera near the Ogasawara Islands, has been observed pulsing its body, propelling it forward by opening and contracting the outer white ring.
- The species designation pays homage to Francesc Pagès, a cnidarian researcher.
- The jellyfish's distinct features suggest it may possess a novel cnidarian venom.

HIGHLIGHTS OF PRIME MINISTER SPEECH AT THE COP28

- Urging countries to rise above self-interest and deliver on all their climate obligations, Prime Minister said that developing countries must get appropriate access to the remaining global carbon budget.
- Speaking at the high-level segment of the COP28 meeting in Dubai (UAE), he also proposed to host the 2028 climate change conference, COP33, in India.
- India has hosted the annual climate change

conference called the conference of parties (COP) of the UNFCCC once earlier - COP8 in 2002.

- Then, the scale of this conference used to be much smaller unlike the most high-profile annual event that it has evolved into now, attracting the attendance of over 100 heads of states and governments, etc.
- India was among very few large economies which were on track to fulfil their climate commitments.

The global climate initiatives India had launched are -

- International Solar Alliance,
- Coalition of Disaster-Resilient Infrastructure,
- Lifestyle for Environment (LiFE) Campaign and
- Decisions like Renewable Energy Tripling and Global Biofuels Alliance taken by the G20 summit under India's presidency.
- The Indian Environment Ministry recently launched Green Credits Initiative, which provides a way for incentivising environmental actions by offering green credits for projects that help the environment in any way.
- In its first round, activities in water conservation and afforestation would be acknowledged.

Highlights of PM Modi's Speech at the COP28:

- The world does not have much time to correct the mistakes of the previous century. The world also will have to be ambitious (in our climate actions).
- Countries need to rise above their narrow self-interests, and fulfil all their climate obligations.
- The energy transition (that is required) has to be just, inclusive, equitable and innovative.
- The world must develop innovative technology and the developed countries must agree to transfer this technology to others.
- India's Green Credits Initiative (is a pro planet, proactive and positive initiative) is something that the entire world should adopt.
- It is an alternative market-based mechanism that prioritises public participation in environment positive projects.

India Raising Common Concerns of the Developing Countries at the COP28:

- The Indian PM repeatedly referred to 'Global South' as he called for more climate finance, technology, and carbon space during his speeches at the COP28 meeting.
- Global South is a new term for developing countries that does not refer to geographical north or south of the equator.
- India has held two Voice of Global South Summits this year in an effort to take leadership of the developing countries, and amplify their concerns at international forums.
- The countries of the Global South (including India) have contributed very little in causing climate change. Yet, the adverse impacts of climate change affect them the most.
- Despite lack of adequate resources, these countries have committed themselves to take climate action. But to fulfil their objectives, the Global South needs climate finance and technology.
- This is natural and justifiable too for the Global South to expect that developed countries help them in the fight against climate change.

Issue of Climate Finance and Climate Budget Raised at the COP28:

- The G20 meeting had agreed that 2030 climate action requires trillions of dollars in climate finance.
- This climate finance has not only to be made available, but it must also be accessible and affordable (to the countries of Global South).
- The Indian PM welcomed the operationalisation of the loss and damage fund on the opening day of COP28.

There is a hope that -

- The COP28 would show real progress on the New Collective Quantified Goal (a new target in the place of US\$ 100 billion per year from 2025 onwards) on Climate Finance.
- The Green Climate Fund and Adaptation Fund must not be starved of money, and they should also be replenished immediately.
- The Multilateral Development Banks should assure that they would provide affordable finance, not just for development projects, but also for climate action.

- The developed countries would diminish their carbon footprint by 2050.
- The Indian PM also stressed that developing countries must get to utilise an appropriate share in the fast-depleting carbon budget.
- Carbon budget is the amount of GHG emissions that science says can be allowed without breaching the 1.5-degree Celsius temperature target.

GREEN RISING INITIATIVE

- Recently, the United Nations Children's Fund (UNICEF)'s Generation Unlimited in collaboration with India's Ministry of Environment, Forest, and Climate Change unveiled the "Green Rising" initiative at COP28 in Dubai.

About Green Rising Initiative:

- This initiative focuses on engaging youth for impactful environmental actions at the grassroots level, aligning with the global effort to address the severe impacts of climate change.
- The global "Green Rising" initiative and the "Green Rising India Alliance" marks a collaborative effort involving UNICEF, Generation Unlimited, and a diverse network of public, private, and youth partners.
- The main goal is to mobilize millions of young people worldwide, encouraging their active participation in green initiatives addressing and adapting to the severe impacts of climate change on their communities.
- Through the YuWaah campaign in India, the focus is on engaging youth to drive impactful environmental actions at the grassroots level.

Key points about the UNICEF

- The United Nations Children's Fund was originally founded as the United Nations International Children's Emergency Fund (UNICEF).
- It was founded by the UN General Assembly on 11 December 1946, to provide emergency food and healthcare to children and mothers in countries that had been devastated by World War II.
- It is a leading source of information on the situation of children around the world.
- It relies entirely on contributions from

governments and private donors.

- The Executive Board is made up of 36 Member States, elected to three-year terms by the Economic and Social Council, with the following regional allocation: Africa (8 seats), Asia (7), Eastern Europe (4), Latin America and Caribbean (5) and Western Europe and Others (12).
- Headquarters: New York City.

KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK (KMGBF)

- A year has passed since the ambitious Kunming-Montreal Global Biodiversity Framework (KMGBF) was adopted at the Convention on Biological Diversity's (CBD) 15th Conference of Parties (CoP15).

Background

- Human activities around the planet have been causing a crisis of biodiversity loss around the globe. This phenomenon has been known as the Holocene extinction, which is the sixth mass extinction event in the earth's history. The decline in nature threatens the survival of a million species and impacts billions of people.
- Due to increasing awareness of the biodiversity crisis, there was pressure from citizens and investors around the world to take action to address the interlinked crises of climate change and biodiversity loss. There is already an international agreement for climate change, the Paris Agreement under the auspices of the United Nations Framework Convention on Climate Change, but until the development of the CBD, there was no similar framework for actions to protect biodiversity to be coordinated internationally.
- Kunming-Montreal Global Biodiversity Framework (GBF)
- The Kunming-Montreal Global Biodiversity Framework (GBF) is an outcome of the 2022 United Nations Biodiversity Conference.
- The GBF was adopted by the 15th Conference of Parties (COP15) to the Convention on Biological Diversity (CBD) on 19 December 2022.
- It has been promoted as a "Paris Agreement for Nature".

AGRICULTURE

UNSEASONAL RAINS AND LIGHTNING IN GUJARAT

- Unseasonal heavy rainfall accompanied by thunderstorms, hailstorms, and lightning strikes recently occurred in Gujarat, leading to the unfortunate loss of lives.
- The India Meteorological Department (IMD) identified multiple weather systems contributing to this unexpected weather event.

Geographic Location

- **Gujarat:** Located on the western coast of India, Gujarat shares its northern border with the state of Rajasthan, eastern border with Madhya Pradesh, southern border with Maharashtra, and western border with the Arabian Sea. The state encompasses diverse geographical features ranging from plains, plateaus, to coastline.

Weather Systems' Influence

Cyclonic Circulation:

- **Northeast Arabian Sea, Saurashtra, and Kutch:** The cyclonic circulation over these regions significantly impacted the weather conditions in Gujarat, leading to unexpected rainfall and thunderstorms.

Western Disturbances:

- **Mediterranean Sea and Northwestern India:** Western Disturbances originating from the Mediterranean Sea region travel across northwestern India, including Gujarat. These disturbances bring winter rainfall and weather changes to the region.

Easterly Trough:

- **Equatorial Region, Arabian Sea:** An Easterly trough, characterized by eastward-flowing winds near the equatorial region and the Arabian Sea, contributed to the atmospheric changes affecting Gujarat's weather patterns.

Regional Impact

- **Topography:** Gujarat's topography varies from arid and semi-arid regions in the northwestern parts of Kutch and Saurashtra to fertile plains in the central and southern regions. The state also hosts the Gir Forest

National Park, the only natural habitat of Asiatic lions.

- **Coastline:** The state boasts a long coastline along the Arabian Sea, impacting its climate with influences from the sea, leading to specific weather patterns and occasional cyclonic activities during the monsoon season.

Atmospheric Conditions

- **Moisture Interaction:** The convergence of moisture-laden air masses from the Arabian Sea and adjoining regions, influenced by multiple weather systems, contributed to the sudden increase in moisture levels in the atmosphere, intensifying rainfall and thunderstorm activities.

Disaster Management and Geographic Vulnerabilities

- **Disaster-prone Areas:** Gujarat, particularly regions like Kutch and Saurashtra, is susceptible to natural calamities such as earthquakes, cyclones, and, as evidenced recently, unseasonal heavy rainfall and lightning strikes.
- **Geographic Vulnerabilities:** The lack of a specific warning mechanism for lightning strikes in the disaster management plan highlights the need for geographic-specific risk assessment and preparedness measures to mitigate the impact of various natural calamities in the region.

LAKADONG TURMERIC

- **Geographical Indication (GI) tag** awarded to Meghalaya's Lakadong turmeric, along with other traditional products such as Garo Dakmanda (traditional dress), Larnai pottery, and Garo Chubitchi (alcoholic beverage).



Lakadong Turmeric

- Lakadong turmeric has been granted the GI tag. A GI tag is a form of intellectual property rights that recognizes and protects products associated with a particular geographical origin and possesses qualities, reputation, or characteristics that are essentially attributable to that place of origin.
- Lakadong turmeric is specifically from the Lakadong area of Jaintia Hills in Meghalaya.
- This variety of turmeric is considered one of the best globally, known for its high curcumin content (around 6.8 to 7.5 per cent). It has a darker colour and is grown organically without the use of fertilizers.
- The GI tag is expected to aid farmers in marketing and provide customers with access to an authentic product. It serves as a unique selling point and can contribute to fetching better market prices for the farmers.

Other Products Awarded GI Tags

- **Garó Dakmanda:** This is a handwoven ankle-length lower garment and is part of the traditional attire of Garó women in Meghalaya.
- **Garó Chubitchi:** This is an alcoholic beverage consumed by the Garó community during feasts and ceremonies. It is a rice-based fermented drink.
- **Larnai Pottery:** This type of pottery is made of black clay from Larnai village. The art form has been passed down through generations.

Significance and Impact

- The GI tags for these products aim to enhance their market competitiveness, both domestically and internationally.
- The recognition is expected to create more livelihood opportunities for the farmers and artisans associated with these products.
- The acknowledgement of Lakadong turmeric's high quality and unique characteristics through the GI tag is likely to boost its popularity and demand in the market.

PRESS MUD

- Sugarcane byproduct press mud can help generate 460,000 tonnes of compressed biogas (CBG) valued at Rs 2,484 crore.

About Press Mud:

- It is often known as filter cake or press cake.
- It is the agricultural waste obtained when cane juice is repeatedly filtered before being sent for sugar extraction.
- The filters are cleaned periodically, and the waste is deposited in the yard of the mill.
- Nearly 3 to 4 percent of press mud is obtained when one tonne of cane is crushed.
- At present, mills recycle this agricultural waste as manure by composting it and supplying it to the farmers in the area.

Benefits

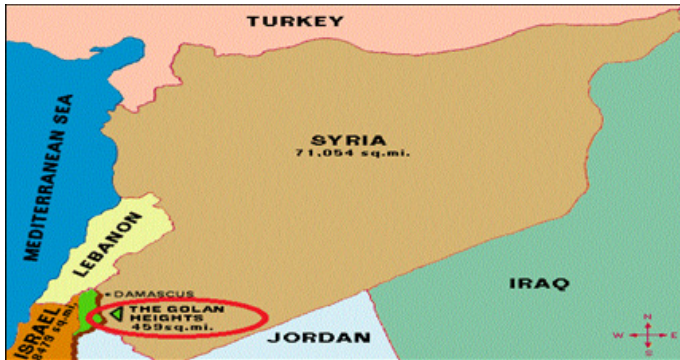
- It can be utilised as a feedstock for biogas production through anaerobic digestion and subsequent purification to create compressed biogas (CBG).
- It is very useful for crops and horticulture because of its richness in various micronutrients.
- It has been acknowledged as a valuable resource for green energy production.
- Issue with press mud: Storing press mud proves challenging as it undergoes gradual decomposition, resulting in the breakdown of organic compounds.

What is compressed biogas (CBG)?

- It is produced naturally through a process of anaerobic decomposition from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc.
- After purification, it is compressed and called CBG, which has a pure methane content of over 95%.
- It is exactly similar to commercially available natural gas in its composition and energy potential. With calorific value (~52,000 KJ/kg) and other properties similar to CNG.

GEOGRAPHY

GOLAN HEIGHTS



- India has voted in favour of a draft resolution in the UN General Assembly that expressed deep concern over Israel not withdrawing from the Golan Heights.

About

- It is a rocky plateau in southwestern Syria, about 60 kilometers (40 miles) south of Damascus.
- The Jordan River and the Sea of Galilee border it on the west, Mount Hermon on the north, the seasonal Wadi Al-Ruqqd River on the east, and the Yarmk River on the south.
- At its broadest point, the Golan measures approximately 44 miles (71 kilometers) from north to south and 27 miles (43 kilometers) from east to west.
- It is somewhat boat-shaped and covers 1,150 square km.

Why is the Golan Heights a source of contention?

- Syria controlled the Golan Heights until 1967.
- During the Six-Day War in 1967, Israel took the majority of the territory, occupying it and annexing it in 1981.
- After annexing the Golan, Israel offered citizenship to the Druze, but the majority declined and continued to identify as Syrians.
- Another 20,000 Israeli settlers live there as well, many of whom work in agriculture and tourism.
- Israel's unilateral acquisition was not accepted internationally, and Syria wants the region to be returned.
- Syria attempted to reclaim the Heights during the 1973 Middle East conflict but was unsuccessful.

- Since Israel and Syria signed a peace treaty in 1974, the Golan Heights has been generally peaceful.
- Israel and Syria had their highest-level discussions in 2000 to discuss the probable return of the Golan Heights and a peace accord.
- However, the negotiations failed, and subsequent talks also failed.

Why do the countries claim the Golan Heights?

- Both sides want the Golan's abundant water and naturally productive land.
- Furthermore, given Syria's civil conflict, Israel views the plateau as a buffer zone between Israeli communities and the instability in Syria.
- Israel is also concerned that Iran is attempting to permanently position itself on the Syrian side of the border to launch strikes on Israel.
- Notably, Iran is a supporter of Syrian President Bashar al-Assad.
- Syria, for its part, insists that the part of the Golan held by Israel remains an occupied territory and thus demands its return.

What is the current UN arrangement there?

- A United Nations Disengagement Observer Force (UNDOF) is stationed in camps and observation posts along the Golan.
- This is supported by military observers of the United Nations Truce Supervision Organization (UNTSO).
- Between the Israeli and Syrian armies is a 400-square-km "Area of Separation".
- This is often called a demilitarized zone in which the two countries' military forces are not permitted under the ceasefire arrangement.
- The Separation of Forces Agreement of 1974 created two lines of separation.
- Behind the Alpha Line to the west of the area of separation, Israeli military forces must remain.
- Behind the Bravo Line to the east of the area of separation, Syrian military forces must remain.
- Extending 25 km beyond the "Area of Separation" on both sides is an "Area of Limitation".
- Here, there are restrictions on the number of

- According to data compiled by US Customs and Border Protection, around 42,000 migrants from India have crossed the southern border illegally between October 2022 to September 2023.
- Since November 2022, around 97,000 Indians have tried to enter the US illegally and arrested by the American authorities.
- While youngsters from Punjab head mostly to Canada, youths from Haryana have the US as their prime destination.

First Leg of Donkey Route

- There are more than 30 Israeli settlements in the Golan.
- The settlements are considered illegal under international law, although Israel disputes this.
- About 20,000 Syrians and 20,000 Israelis live in the Golan.
- The Syrian capital, Damascus, can be seen from the top of the Golan Hills.
- When it rains here, its water goes to the Jordan River, which supplies water in dry areas. It is believed that this water supplies one-third of Israel's water.
- Apart from this, the land here is very fertile, which is very good for farming.

- The first step in the most popular donkey route from India is to reach a Latin American country like Ecuador, Bolivia, Guyana, Brazil and Venezuela.
- The reason behind choosing a Latin American country for transit is that **reaching these countries is easier for Indians.**
- Not only do these countries provide visa on arrival for Indians, those requiring the pre-arrival visas easily give tourist visas to Indians.
- Also, the agents that manage the illegal migration are based in these countries where they have 'links' for illegal trafficking.
- **Alternate Route:** In some cases, the agents arrange a direct visa for Mexico from Dubai. But directly landing in Mexico is considered dangerous as there is fear of arrest by local authorities.
- So, most agents land their clients in a Latin American country and then take them to Colombia.

[illegible]

- The prevalence of illegal migration through the 'donkey route' is now the subject of the Bollywood movie Dunki.

Crossing Panama's Forest

- 'Dunki', a regional pronunciation of donkey, originated from a Punjabi idiom that means "hopping from one place to another".
- It is a dangerous immigration route taken by several lakhs of Indians to reach countries like the US, the UK or Europe.

- After arriving in Colombia, the migrants enter Panama, where the route involves crossing the Darién Gap, a dangerous forest between the two countries.
- The risks include a lack of clean water, wild animals and criminal gangs which can lead to robbery and even rape.
- In one of the reported cases, Jitendra and his group from Haryana were robbed of their money, phones and even their clothes and shoes while crossing the forest. They had to trek in the cold and snow barefoot.
- The journey takes eight to ten days and if something goes bad or a migrant die, then there is no way to send the body back home.

- There is an alternate safer route from Colombia where migrants avoid the dangerous forests of Panama. The route starts from San Andrés where fishing boats with illegal migrants go to Fisherman's Cay, around 150 kilometres from San Andrés, and then transferred onto another boat to move forward to Mexico, according to the report.

Entering Mexico

- From Panama, the migrant head to Mexico for entering the US border and Guatemala is a big coordination centre on this route.
- Mexico is a critical path on the entire journey as it involves hiding from government agencies. The 3,140-km border separating the US and Mexico has fencing, which the migrants have to jump across. Many others cross the dangerous Rio Grande River. However, more migrants are detained after crossing the border rather than while crossing the fence or entering by sea.

Route through Europe

- Many migrants also chose Europe instead of transiting through a Latin American country. Though it is easier to go through Europe to Mexico, but the route is under the lens of the authorities.
- Despite the odds and the dangerous route, the Dunki method is the most popular method of illegal immigration in Punjab and Haryana, and has expanded to Uttar Pradesh, Himachal Pradesh, and Gujarat.
- The "donkey route" is offered to people by a vast network of visa agencies operating in the Punjab region with varying degrees of legality. These agencies often break rules, exploit any legal loopholes or have links with criminal smuggling networks across Europe operate across several Indian states.

TROPICAL CYCLONE JASPER

- The tropical cyclone witnessed by Queensland in Australia during December and during an El Nino year "is not normal"; such events are becoming unpredictable as well.
- A deluge, brought about by the remnants of Tropical Cyclone Jasper, has caused the largest flood in more than a century in Australia's Far North Queensland (FNQ).
- Jasper made landfall last week along the

FNQ coast on December 13, 2023.

About Cyclone Jasper

- Severe Tropical Cyclone Jasper was a powerful and long-lived tropical cyclone that impacted northern Queensland with torrential rainfall.
- The third disturbance of the 2023–24 South Pacific cyclone season and the first named storm and severe tropical cyclone of the 2023–24 Australian region cyclone season, Jasper originated from an area of low pressure located in the South Pacific Ocean.

What is a cyclone?

- A cyclone is a large-scale system of air that rotates around the center of a low-pressure area.
- It is usually accompanied by violent storms and bad weather.
- As per NDMA, a cyclone is characterized by inward spiraling winds that rotate anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

What are extra tropical cyclones?

- Also known as mid-latitude cyclones, extra tropical cyclones occur outside the tropics (that is beyond the areas that fall under the Tropic of Cancer and the Tropic of Capricorn).
- They have "cold air at their core, and derive their energy from the release of potential energy when cold and warm air masses interact", according to the US National Oceanic and Atmospheric Administration (NOAA).
- It added that such cyclones always have one or more fronts connected to them.
- A front is a weather system that is the boundary between two kinds of air masses, where one front is represented by warm air and the other by cold air.
- Such cyclones can occur over land and ocean.

What are tropical cyclones?

- Tropical cyclones are those which develop in the regions between the Tropics of Capricorn and Cancer.
- They are the most devastating storms on Earth.
- Such cyclones develop when "thunderstorm activity starts building close to the center of

circulation, and the strongest winds and rain are no longer in a band far from the center," NOAA noted.

- The core of the storm turns warm, and the cyclone gets most of its energy from the "latent heat" released when water vapour that has evaporated from warm ocean waters condenses into liquid water, the agency added.
- Moreover, warm fronts or cold fronts aren't associated with tropical cyclones.
- Tropical cyclones have different names depending on their location and strength.
- For instance, they are known as hurricanes in the Caribbean Sea, the Gulf of Mexico, the North Atlantic Ocean, and the eastern and central North Pacific Ocean.

How do cyclones form?

- 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" or 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.

SATPURA NATIONAL PARK



- The forest department of Satpura Tiger Reserve has hit upon a rock painting dating back 10,000 years.
- Satpura Tiger Reserve (STR) also known as Satpura National Park is located in the Narmadapuram District of Madhya Pradesh.
- Protected areas it includes
- The tiger reserve comprises three protected areas, Satpura National Park, Bori Wildlife Sanctuary, and Pachmarhi Sanctuary.

Watershed Area

- Satpura, basically meaning "Seven Folds", forms a watershed between Narmada and Tapti River is triangular in shape.

Biogeography

- It is part of the Deccan bio-geographic zone of India.

Animals

- Satpura National Park is rich in biodiversity. The animals here include leopard, sambar, chital, Indian muntjac, nilgai, four-horned antelope, Chinkara, wild boar, bear, black buck, fox, porcupine, flying squirrel, mouse deer, and Indian giant squirrel.

Birds

- There are a variety of birds. Hornbills and peafowl are common birds found here.
- The flora consists of mainly sal, teak, tendu, Phyllanthus emblica, mahua, bel, bamboo, and grasses and medicinal plants.

Tiger Population

- STR increased its numbers from 13 in 2010 to 48 in 2021.
- Satpura also received the Conservation

Excellence Award for outstanding reserve management.

Recognition

- Satpura Tiger Reserve was declared as the first biosphere reserve of Madhya Pradesh in the year 1999.

GHAGGAR RIVER

- To spread awareness among the public against throwing waste into the Ghaggar River, trans Ghaggar residents carried out a cleanliness drive at Chatt Puja Ghat of the river recently.

About Ghaggar River:

- It is an intermittent river that flows only during the monsoon season.

Course:

- It rises from the Shivalik Range in northwestern Himachal Pradesh.
- It flows about 200 miles (320 km) southwest through Haryana state, where it receives the Saraswati River.
- It eventually dries up in the Thar Desert in Rajasthan.
- This seasonal river feeds two irrigation canals that extend into Rajasthan. The Hakra, which flows in Pakistan, is the continuation of the Ghaggar River in India, and they are together called the Ghaggar - Hakra River.

Historical Significance:

- Several historians identify Ghaggar with the Vedic Saraswati River.
- Along the banks of the Ghaggar River, many settlements of the Indus Valley Civilization have been excavated.
- Hence it is believed that the ancient settlements on its banks are the creation of ingenious Vedic Aryans.
- It is believed that the rivers Sutlej and Yamuna once flowed into the Ghaggar-Hakra river bed.
- Tributaries: The main tributaries of the Ghaggar are the Kaushalya River, Markanda, Sarsuti, Tangri, and Chautang.

YELLOW SEA

- A US F-16 fighter appears to have crashed into Yellow Sea waters off the coast of South Korea recently.

About Yellow Sea:

- It is a marginal sea in the western Pacific Ocean.

Location:

- It is situated between mainland China to the west and north, the Korean Peninsula to the east, and the Shandong Peninsula and Liaodong Peninsula to the south.
- It is positioned to the north of the East China Sea.
- The sea was named for the yellowish sand particles originating from the Gobi Desert that descend on the surface of the sea, thereby giving it a golden yellow color.
- Size: Also referred to in China as Huang Hai and in North and South Korea as the West Sea, the Yellow Sea is 870 kilometres long and 556 kilometres wide, covering an area of 380,000 sq km.
- Depth: It is one of the largest shallow areas of the continental shelf in the world, with an average depth of 44 metres and a maximum depth of 152 metres.
- Inflow: The main rivers that drain into the Yellow Sea include the Hai River, the Yalu River, the Han River, the Taedong River, and the Yellow River.
- Islands: The Yellow Sea is dotted with numerous islands, the largest of which include Jeju Island (South Korea), Shandong Peninsula islands (China), and Ganghwa Island (South Korea).
- Climate: The climate is characterized by very cold, dry winters and wet, warm summers.

Currents:

- The warm current of the Yellow Sea is a part of the Tsushima Current, which diverges near the western part of the Japanese island of Kyushu and flows at less than 0.5 mile (0.8 km) per hour northward into the middle of the sea.
- Along the continental coasts, southward-flowing currents prevail, which strengthen markedly in the winter monsoon period, when the water is cold, turbid, and of low salinity.

GREEN TURTLE

- As per a study, rising global temperatures could lead to an increase in the nesting range of green turtles in the Mediterranean Sea.



About Green Turtle:

- The Green turtle (*Chelonia mydas*) is one of the largest sea turtles and the only herbivore among the different species.
- They are in fact named for the greenish color of their cartilage and fat, not their shells.
- In the Eastern Pacific, a group of green turtles that have darker shells are called black turtles by the local community.
- They graze on seagrasses and algae, which maintains the seagrass beds and makes them more productive.
- These species migrate long distances between feeding grounds and the beaches from where they hatched.
- They are potentially particularly susceptible, as the sex of their offspring is dependent on incubation temperature.
- **Distribution:** Green turtles are found mainly in tropical and subtropical waters.
- **Conservation status**
- **IUCN:** Endangered
- **CITES:** Appendix 1
- **Threats:** Habitat loss, fisheries by catch and illegal trade etc.

Key facts about the Mediterranean Sea

- It is an intercontinental sea that is bordered by the continent of Europe in the north, by Asia in the east, and by Africa in the south.
- In the west, the Mediterranean Sea is connected to the Atlantic Ocean via the narrow Strait of Gibraltar.
- In the extreme northeast, it is connected to the Black Sea via the Dardanelles Strait, the Sea of Marmara, and the Bosphorus Strait.

- The Mediterranean Sea is also connected to the Red Sea via the Suez Canal in the southeast.
- **Climate:** The region is characterized by the prevailing subtropical climate known as the Mediterranean climate, with usually mild, wet winters and hot, dry summers.
- Mediterranean Sea waters are more saline compared to the waters of the Atlantic. There is a continuous movement of water from the Atlantic into the Mediterranean and vice versa through the Strait of Gibraltar.

WHEELER ISLAND

- As per reports, India's premier agency for military R&D, the Defence Research Development Organisation (DRDO), will pause missile testing at Wheeler Island off Odisha coast during the mass nesting season of Olive Ridley sea turtles.

About Wheeler Island:

- Abdul Kalam Island, formerly known as Wheeler Island, is an island off the coast of Odisha.
- The island was renamed to honour the late President Dr. APJ Abdul Kalam and also to encourage the youth to pursue a scientific temperament.
- It is the only place in India that has an integrated test range maintaining a missile testing facility, which is located on this island.
- All indigenous missiles, like Akash missile, Agni missile, Prithvi Missile etc. are tested from here.
- The island is 2 km long, having an area of 390 acres, and is basically a soil formation without rocks in the Bay of Bengal.

CYCLONE MICHAUNG

- The National Disaster Management Authority (NDMA) classifies cyclones broadly into two categories: extratropical cyclones and tropical cyclones.
- A cyclone is a large-scale system of air that rotates around the center of a low-pressure area. It is usually accompanied by violent storms and bad weather.

- As per NDMA, a cyclone is characterized by inward spiraling winds that rotate anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

What are extratropical cyclones?

- Also known as mid-latitude cyclones, extratropical cyclones occur outside the tropics (that is beyond the areas that fall under the Tropic of Cancer and the Tropic of Capricorn).
- They have "cold air at their core, and derive their energy from the release of potential energy when cold and warm air masses interact", according to the US National Oceanic and Atmospheric Administration (NOAA).
- It added that such cyclones always have one or more fronts connected to them.
- A front is a weather system that is the boundary between two kinds of air masses, where one front is represented by warm air and the other by cold air.
- Such cyclones can occur over land and ocean.

What are tropical cyclones?

- Tropical cyclones are those which develop in the regions between the Tropics of Capricorn and Cancer.
- They are the most devastating storms on Earth.
- Such cyclones develop when "thunderstorm activity starts building close to the center of circulation, and the strongest winds and rain are no longer in a band far from the center," NOAA noted.
- The core of the storm turns warm, and the cyclone gets most of its energy from the "latent heat" released when water vapor that has evaporated from warm ocean waters condenses into liquid water, the agency added.
- Moreover, warm fronts or cold fronts aren't associated with tropical cyclones.
- Tropical cyclones have different names depending on their location and strength.

INTERNATIONAL RELATIONS

CONFERENCE ON DISARMAMENT

- Foreign Secretary Vinay Kwatra, UN discussed about India's presidency of the Conference on Disarmament.



About

- The Conference on Disarmament (CD) is a multilateral disarmament forum.
- It was established by the international community to negotiate arms control and disarmament agreements based at the Palais des Nations in Geneva.

History

- The Conference was first established in 1979 as the Committee on Disarmament as the single multilateral disarmament negotiating forum of the international community.
- It was renamed the Conference on Disarmament in 1984.

Agenda behind its Formation

- The Conference was created with a permanent agenda, also known as the "Decalogue", which includes the following topics:
 - Nuclear weapons in all aspects
 - Other weapons of mass destruction
 - Conventional weapons
 - Reduction of military budgets
 - Reduction of armed forces
 - Disarmament and development
 - Disarmament and international security
 - Collateral measures; confidence building measures; effective verification methods

concerning appropriate disarmament measures, acceptable to all parties

INTERNATIONAL MARITIME ORGANISATION (IMO)

- India was re-elected to the International Maritime Organisation (IMO) Council with the highest tally.
- India's re-election falls under the Category of 10 states with the largest interest in international seaborne trade.
- India got 157 votes out of the 167.
- The other countries in the category are Australia, Brazil, Canada, France, Germany, Netherlands, Spain, Sweden, and the United Arab Emirates.
- The term of the council will be for the biennium 2024-25.



Significance

- India's re-election with the highest tally in the election sustained an unbroken record of India's continuous service at IMO.
- The highest votes are indicative of the government's determination to strengthen India's varied contributions to international maritime operations.

Moving Ahead

- To enhance representation at IMO India aims at appointing permanent representatives at IMO London under the Maritime India Vision (MIV) 2030.
- To enhance and garner maritime expertise for India, it is proposed that India should nominate at least 2 qualified candidates for the Junior Professional Officer (JPO) Program at the IMO.
- The Amrit Kaal Vision 2047 has also set goals to strengthen India's global maritime presence.
- There are 43 initiatives identified as part of Amrit Kaal Vision 2047 Action Plan of which, the key initiatives focus on

- strengthening our global maritime presence which includes a dedicated IMO cell in India,
- The appointment of a permanent representative at IMO headquarters, London,
- implementation of BIMSTEC Master Plan,
- creating a robust BIMSTEC institutional structure to ensure implementation of regional projects in a coordinated & timely manner etc.

About

- The International Maritime Organisation (IMO) is a specialized agency of the United Nations responsible for regulating shipping.

Establishment

- The IMO was established following an agreement at a UN conference held in Geneva in 1948.
- The IMO came into existence ten years later, meeting for the first time on 17 March 1958.

Headquarters

- Headquartered in London, United Kingdom, IMO currently has 175 Member States and three Associate Members.

Mandate

- IMO oversees the maritime sector which in turn underpins international trade, transport, and all maritime activities.

Structure

- The council is the executive organ of IMO and is responsible, under the assembly, for supervising the work of the organization.
- Between sessions of the assembly, the council performs the functions of the assembly, except that of making recommendations to governments on maritime safety and pollution prevention.

Functions of IMO

- The major areas of concern that the International Maritime Organisation has been able to bring under regulation have been the prevention of accidents, setting up safety standards for ships and other vessels (including design and materials) for the member states to abide by, maintaining adherence to the established treaties of safety and security, prevention of pollution and other avoidable human disasters.
- IMO also facilitates technical co-operation

among member states, setting up an audition and monitoring scheme for these rules and standards and finally monitoring liabilities and compensation in case of breach of any of these regulations.

- Thus, the International Maritime Organisation plays a crucial role in modern society's progress toward a better and healthier commercial and transportation environment.

Pillars of IMO

- The four pillars of IMO are the
- International Convention for the Safety of Life at Sea (SOLAS),
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW),
- International Convention for the Prevention of Pollution from Ships (MARPOL) and
- Maritime Labour Convention (MLC).

Funding of the IMO

- An assembly of members governs the IMO.
- It is also financially administered by a member council elected from the assembly.
- It has five committees and several technical sub-committees.

8TH WONDER OF THE WORLD

- Situated in the northern province of Siem Reap in Cambodia, Angkor Wat is the largest religious monument globally, covering approximately 1,200 square meters of intricately carved bas-reliefs.



Historical Significance:

- Construction: Built in the 12th century by Khmer Emperor Suryavarman II as a Hindu temple dedicated to Lord Vishnu, it was later converted into a Buddhist temple by Jayavarman VII.

Transition to Buddhism:

- The transition from Hinduism to Buddhism is reflected in the temple's carvings, depicting scenes from both Hindu and Buddhist mythology.

Adjacent Structures:

- Angkor Wat is part of a more extensive complex that includes the Bayon Temple in Angkor Thom, featuring numerous sculptural decorations.

Archaeological Importance:

- The site spans 400 square kilometers and encompasses remnants of various capitals of the Khmer Empire from the 9th to the 15th centuries, making it a significant archaeological site in Southeast Asia.

Key Features:

- Architecture: Angkor Wat's architectural brilliance is showcased in its sandstone block construction and a 15-foot-high wall surrounding the city, temple, and residents, along with a wide moat for protection.
- Bas-Reliefs: Scores of bas-reliefs adorn the temple walls, depicting deities and narratives from Hindu and Buddhist traditions.
- Symbolism: The central temple complex's symmetry and precision feature five lotus-shaped towers representing Mount Meru, a mythical abode of gods in Hindu and Buddhist cosmology.

Interesting Facts:

- Alternate Names: Angkor Wat is also known as Yasodharapura and derives its name from the Khmer word "nokor," meaning "kingdom," originating from the Sanskrit word "nagara," meaning "city."

UNESCO Protection:

- Recognizing its significance, UNESCO has a comprehensive program in place to protect Angkor Wat and its surroundings.
- Sunrise Spectacle: Tourists flock to witness the breathtaking sunrise over Angkor Wat's towers, which bathes the temple in stunning shades of pink, orange, and gold.

EXERCISE SURYA KIRAN- XVII

- The Joint Military Exercise SURYA KIRAN, in its 17th edition, is a significant biennial event held alternatively in India and Nepal.



Details

- The recent exercise, scheduled from November 24th to December 7th, 2023, is being conducted in Pithoragarh, Uttarakhand.
- It involves the participation of the Nepal Army contingent from the Tara Dal Battalion and the Indian Army contingent, led by a Battalion from the KUMAON Regiment.

Objectives and Focus Areas

- **Enhancing Interoperability:** The primary aim of SURYA KIRAN is to improve interoperability between the Indian and Nepalese troops. It focuses on refining combat skills, operational capabilities, and strengthening coordination in challenging terrains.
- **Combat Training:** The exercise emphasizes jungle warfare techniques, counter-terrorism operations in mountainous regions, and humanitarian assistance and disaster relief operations as per the United Nations Charter.
- **Technology Integration:** It includes training on the employment of drones, counter-drone measures, and aviation aspects. Additionally, it emphasizes environmental conservation efforts during military operations.
- **Cultural Exchange and Best Practices:** SURYA KIRAN serves as a platform for soldiers from both countries to exchange ideas, share experiences, and understand each other's operational procedures, fostering deeper military ties and mutual understanding.

PAAT-MITRO

- The Jute Corporation of India Limited (JCI) has developed a mobile application called "Paat-Mitro" to help jute farmers with important information about MSP and agronomy.

Key Highlights

- The app was launched by the Secretary, Ministry of Textiles during the 'Jute Symposium' in New Delhi. The app is available in 6 languages and can be downloaded for free from Google Play Store.
- "Paat-Mitro" provides jute farmers with the latest agronomic practices and Minimum Support Prices (MSP) for their crops.
- It gives information about Jute Gradation Parameters, Farmer-centric schemes like 'Jute-ICARE', weather forecasts, JCI's Purchase Centers' locations, Procurement Policies and more.
- Farmers can track the status of their payments for the raw jute sold to JCI under MSP Operation. The app also features a Chatbot that can answer their queries.

Jute

- Jute thrives in a sub-tropical, warm-humid climate with well-distributed rainfall (150-250 cm) and temperatures between 20°C and 27°C.
- It prefers fertile alluvial soil, especially riverine plains like the Ganges Delta.
- Over 85% of global jute cultivation is concentrated in the Ganges Delta, spanning parts of India and Bangladesh.
- India is the world's largest producer, followed closely by Bangladesh. Other producers include China, Thailand, Nepal, and Myanmar.
- Jute cultivation has shaped agricultural landscapes in areas like West Bengal and Bangladesh. Its monoculture patterns and intensive water usage can pose environmental challenges like soil erosion and depletion of organic matter.
- Jute supports the livelihoods of millions of farmers, processors, and traders across its production and trade chain. In India alone, it employs over 4 million farm families and 0.37

million workers in mills and allied activities.

- Jute is a crucial export commodity for India and Bangladesh, generating valuable foreign exchange. However, competition from synthetic fibres and shifting consumer preferences has posed challenges to the industry's economic viability.
- To stay relevant, jute producers are diversifying into niche products like blended fabrics, handicrafts, and bio-composites, leveraging jute's biodegradable and eco-friendly qualities.

INS TARMUGLI

- Recently, INS Tarmugli, a Fast Attack Craft has been commissioned into the Navy at a ceremony held at Naval Dockyard, Visakhapatnam.
- It is the first Follow-on Water Jet Fast Attack Craft (WJFAC), is an improved version of WJFAC, earlier constructed by GRSE.
- It is built by M/s Garden Reach Shipbuilders and Engineers Ltd (GRSE).
- It is conceived, designed and built indigenously.
- It would be deployed for coastal patrol and surveillance operations along the East Coast of India.
- It is named after a picturesque island in the Andaman group.

Features:

- The ship is capable of operating in shallow waters at high speeds and is equipped with enhanced fire power.
- It is built for extended coastal and offshore surveillance and patrolling.
- It is fitted with advanced MTU engines, water jet propulsion and the latest communication equipment.

KARRAR COMBAT DRONES

- Iran recently unveiled advanced Karrar combat drones armed with air-to-air missiles, enhancing its air defence capabilities.

About Karrar Combat Drones:

- It is an Unmanned Combat Air Vehicle (UCAV) developed by Iran.

- It is the first long-endurance, combat-capable Iranian drone.
- It will be strategically deployed along border areas, providing air defence units with the capability to intercept and neutralize hostile aerial threats at significantly reduced costs compared to traditional manned fighter sorties.

Features:

- The Karrar drone, which was first introduced in 2010, has an operational range of up to 1,000 kilometres (620 miles).
- It has a maximum speed granted by its turbojet installation of 560 miles per hour.
- It reportedly boasts a service ceiling altitude of 47,000 feet.
- Lacking any retractable or fixed undercarriage, the Karrar is launched via rocket-assist (with a catapult launching rail) and is recovered by way of a parachute-retarded freefall.
- It has been equipped with the Majid thermal missile with a range of 8 kilometres.

BUOY

- A wave rider buoy, equipped with GPS and various weather-related instruments, was recently found ashore at the Gopalpur Military Station in Ganjam district, Odisha.



About Buoy:

- A buoy is a floating object anchored at a definite location to guide or warn mariners, to mark the positions of submerged objects, or to moor vessels in lieu of anchoring.
- Buoys are often brightly coloured and have distinctive shapes or patterns, making them easily visible to ships and other watercraft.
- Buoys are commonly found in harbours and ports, along coastlines, and in rivers and

lakes.

- They are maintained by various organisations, such as the Coast Guard and other navigational authorities.

Buoyage system:

- For the sake of maintaining uniformity in buoyage systems worldwide, the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) divided the world into two regions: Region A and Region B.
- Region A includes Europe, Australia, New Zealand, Africa, the Gulf, and some Asian countries, whereas Region B comprises North, South, Central America, Japan, Korea, and the Philippines.
- IALA proposed a system allowing the use of lateral marks in each region, but in Region A, the colour red of the lateral system is used to mark the port side of channels and the colour green for the starboard side.
- In Region B, the colours are reversed.
- Special-purpose buoys are designed for a variety of uses; they include cable buoys, anchor buoys, or race buoys.
- A mooring buoy differs from other types in that it is not an aid to navigation but a point to which vessels may be tied up.

What are starboard side and port side?

- The port side is the ship's left side when looking forward towards the bow of the ship.
- The starboard is on the right side of the ship when facing the bow.
- The bow is the part of the ship that is generally most forward when the ship is moving. The stern is the back of the ship or its after-most part.

NATIONAL AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (NAFIS)

- The Minister of State for Home Affairs highlighted the significance of the National Automated Fingerprint Identification System (NAFIS) in the Rajya Sabha.

Details

- The National Automated Fingerprint Identification System (NAFIS) in India stands as a pivotal component of law enforcement,

revolutionizing criminal identification and investigation through its multifaceted functionalities and advanced features.

Foundation of NAFIS

- NAFIS acts as a centralized repository, housing an extensive database of fingerprints and palm prints collected from individuals primarily during their interaction with law enforcement agencies, such as upon arrest or during the immigration process.
- Each person is assigned a unique National Fingerprint Number (NFN) that serves as their distinct identifier within the system.

Operational Aspects

- When an individual is arrested or has their prints recorded during immigration proceedings, these prints are promptly captured and entered into the NAFIS database. This initiates the creation of a digital record linked to their unique NFN.
- In instances where fingerprints are recovered from a crime scene, NAFIS employs an automated comparison process. It scans the database for potential matches, aiding investigators by providing leads for further examination and analysis.
- NAFIS extends its functionality beyond India's borders by being interoperable with fingerprint databases of other nations, facilitating cross-border investigations.

Key Features

- **Centralized Database:** NAFIS consolidates fingerprint data from all states and Union Territories in India, enabling seamless access and cross-matching across the nation.
- **Speed and Accuracy:** The automated fingerprint matching system swiftly and accurately provides results, expediting investigations and enhancing their reliability.
- **Scalability:** Designed to handle vast volumes of fingerprint data, NAFIS can readily expand to accommodate the growing influx of criminal records.
- **Security Measures:** Robust security protocols safeguard sensitive data within NAFIS, ensuring protection against unauthorized access or breaches.

Benefits and Impact

- **Enhanced Criminal Identification:** NAFIS significantly bolsters law enforcement

agencies' ability to identify criminals, resulting in increased arrest rates and convictions.

- **Crime Solving:** It plays a pivotal role in solving crimes by furnishing investigators with critical leads, effectively reducing crime rates and fortifying public safety.
- **Identity Theft Prevention:** By offering a secure means to verify individuals' identities, NAFIS actively combats identity theft and fraudulent activities.
- **Operational Efficiency:** NAFIS streamlines the criminal identification process, saving valuable time and resources for law enforcement agencies.

Future Prospects

- **Integration with other Databases:** Potential integration with additional crime databases, such as DNA databases, could provide a more comprehensive view of criminal activities.
- **Advancements in Matching Algorithms:** Continuous development of new algorithms could further enhance the speed and accuracy of fingerprint matching.
- **Expansion into Biometric Technologies:** NAFIS might broaden its scope to encompass other biometric technologies like iris recognition and facial recognition, amplifying its identification capabilities.
- NAFIS stands as a cornerstone in India's law enforcement arsenal, contributing significantly to criminal identification, crime resolution, and public safety enhancement. As it evolves, NAFIS is poised to play an even more impactful role in combating crime through continuous advancements and integrations with cutting-edge technologies.

VOICE OVER 5G (VO5G)

- Reports indicate Reliance Jio, India's largest mobile carrier, has been testing Voice over New Radio (VoNR) behind the scenes.
- It is also known as Voice over New Radio (VoNR).
- This standard allows voice calls over 5G networks instead of the current standard that uses 4G.
- In simple terms, Vo5G takes all the improvements of 5G – speed, capacity, responsiveness – and applies them squarely to voice.

- It aims to have all that infrastructure and interoperability ready well in advance.
- To use Vo5G, you need three things: a phone that supports Vo5G, a carrier that offers Vo5G, and a 5G signal in your area.

How is VoNR better than VoLTE?

- VoNR brings clear advances over VoLTE with 5G's substantially higher bandwidth and lower latency compared to 4G LTE.
- Enhanced call quality: It utilizes more advanced audio codecs that provide superior clarity and fidelity based on 5G's increased data capacity.
- Faster connection times: It promises faster call connection times, ensuring a seamless and prompt user experience.

Improved reliability:

- Vo5G aims to eliminate the notorious call drop issues, particularly during transitions between 5G and 4G.

SOVEREIGN ARTIFICIAL INTELLIGENCE

- India's endeavor to establish its own 'sovereign AI' entails the nation's commitment to develop, control, and utilize artificial intelligence (AI) technologies on a national scale.
- This initiative aims to create a comprehensive AI ecosystem under the governance of the Indian government, focusing on various real-life applications across sectors such as healthcare, agriculture, governance, language translation, and more.

Details

- Components of India's Sovereign AI Initiative

Digital Public Infrastructure (DPI):

- India's successful examples, like Aadhaar (biometric identity program) and Unified Payments Interface (UPI), form the foundation of the Digital Public Infrastructure (DPI).
- DPI involves the government sanctioning underlying technology, later extended to private entities to develop diverse use cases.

India's Plan for Controlling its AI

- National Data Governance Framework Policy:
- Proposal for an India Datasets platform housing non-personal and anonymized

datasets from Central government entities.

- Accessibility of this data to startups, Indian researchers, and stakeholders to spur data-led research and innovation.

Unified National Data Sharing Platform:

- A unified platform to facilitate data sharing and exchange among various stakeholders including government bodies, private companies, academia, startups, and more.
- Provision for monetizing non-personal data held by the Indian datasets platform.
- Regulatory Framework and Approach

Regulation of AI:

- India plans to introduce laws and regulations governing AI, considering its significant impact on the digital economy.
- The approach involves a hybrid model combining elements from Europe (focused on citizens' rights) and the US (market-oriented regulation).

Potential Regulation for Big Tech Companies:

- Consideration of directives to big tech companies like Facebook, Google, and Amazon to share anonymized personal data with a government-backed database.
- Drafting of the Digital India Bill aiming to mandate tech giants to deposit non-personal data they possess into the India datasets platform.

Implementation and Future Considerations

- India's strategy to harness economic benefits from aggregated non-personal datasets aligns with recommendations from committees focusing on encouraging innovation while ensuring national security.
- The Digital India Bill, including directives on AI regulation and data sharing, is expected to come into effect after the 2024 general election.

About Sovereign Artificial Intelligence

Definition and Significance:

- **Sovereignty in AI:** Refers to a nation's capability to exercise control and authority over AI technologies developed, utilized, or deployed within its jurisdiction.
- **Significance:** Sovereign AI emphasizes a nation's desire to protect its interests, ensure ethical AI usage, promote national security,

drive economic growth, and maintain control over critical AI infrastructure and applications.

Components of Sovereign AI:

Regulatory Frameworks:

- Governments create policies, laws, and regulations governing AI research, development, and deployment to ensure compliance with ethical standards, data privacy, security, and accountability.

National AI Strategies:

- Nations formulate comprehensive strategies outlining AI development goals, investment plans, skill development, and ethical guidelines to drive innovation and competitiveness.

Data Sovereignty:

- Emphasizes the control and ownership of data generated within a nation's borders, ensuring protection against unauthorized access, and regulating cross-border data flow.

Security and Defense:

- Sovereign AI involves efforts to develop AI technologies for national security, defense, and surveillance while safeguarding against potential threats and vulnerabilities.

Ethical AI Principles:

- Incorporating ethical considerations into AI development and deployment to ensure fairness, transparency, accountability, and non-discrimination in AI systems.

Global Perspectives on Sovereign AI:

- **National Approaches:** Various nations adopt unique strategies and policies:
- China emphasizes "AI sovereignty" to control technology development and reduce dependency on foreign AI.
- European Union's focus on "European AI" aims for ethical AI, data protection, and technological sovereignty.
- India's "National AI Strategy" focuses on AI for social empowerment, economic growth, and addressing societal challenges.

Challenges and Considerations:

- **Ethical Dilemmas:** Balancing sovereignty with global ethical standards and ensuring responsible AI use.

- **Data Privacy and Security:** Safeguarding citizen data while enabling innovation and research.
- **AI Talent and Innovation:** Developing skilled workforce and fostering innovation without stifling international collaboration.
- **Regulatory Harmonization:** Achieving compatibility and consistency in AI regulations across borders for seamless global cooperation.

DEFENCE ACQUISITION PROJECTS

- **Defence Acquisition Council,** chaired by Defence Minister Rajnath Singh, gives initial approval for acquisition of the indigenously developed aircraft for armed forces; 98% of total procurement to be sourced from domestic industries.

Approved Projects:

- **Tejas Aircraft:** Initial approval granted for the procurement of 97 Tejas light combat aircraft.
- **Prachand Helicopters:** Approval for the acquisition of 156 Prachand combat helicopters.

Focus on Self-Reliance:

- Emphasizing self-reliance, 98% of the total procurement is set to be sourced from domestic industries, aligning with the goal of achieving 'aatmanirbharta' (self-reliance) in defence manufacturing.

Combat Fleet Upgrades:

- Indian Air Force's proposal to upgrade its Su-30 fighter fleet by Hindustan Aeronautics Ltd. (HAL) received approval.

Anti-Tank Munitions:

- Approval for the procurement of two types of anti-tank munitions: Area Denial Munition (ADM) Type-2 and -3.

Naval Assets Enhancement:

- Acquisition and integration approval for automatic target tracker (ATT) and digital basaltic computer (DBC) for T-90 tanks.
- Procurement approval for medium-range anti-ship missiles (MRAShM) for the Navy, serving as a primary offensive weapon for Indian naval ships.

Significance

- **Enhanced Combat Capabilities:** The acquisition projects aim to significantly augment India's combat capabilities, modernizing its defence assets and fostering indigenous defence manufacturing.
- **Strategic Defence Enhancement:** The move aligns with India's efforts to bolster its defence infrastructure amidst ongoing military stand-offs, emphasizing the importance of self-reliance and indigenous defence production capabilities.

About DAC

- **Role and Functions:**
- **Decision-Making Body:** The DAC holds the highest authority in the Ministry of Defence for approving and guiding the acquisition of new defense equipment, technologies, and systems for the armed forces.
- **Capital Acquisitions:** It is responsible for approving procurement proposals, including the acquisition of defense platforms, weapons, technology upgrades, and major defense systems.
- **Policy Formulation:** The council is involved in formulating defense acquisition policies, strategies, and frameworks aimed at enhancing India's defense capabilities and modernizing its armed forces.

Composition:

- **Chairmanship:** The Minister of Defence chairs the Defense Acquisition Council, leading discussions, deliberations, and decision-making processes related to defense acquisitions and policies.
- **Membership:** The council comprises senior officials from the Ministry of Defence, the Armed Forces, and other stakeholders involved in defense acquisition and policymaking.

History:

- **Formation:** The DAC was established in 2001 following recommendations from the Group of Ministers after the Kargil War in 1999. These recommendations aimed at reforming the national security system, enhancing defense preparedness, and streamlining defense acquisitions.
- **Post-Kargil Reforms:** The formation of the DAC was part of the post-Kargil reforms to revamp and strengthen India's defense

apparatus, particularly in the context of defense acquisitions and decision-making processes.

INS KADMATT

- Indian Navy Ship (INS) Kadmatt deployed to the North Pacific recently conducted Underway Replenishment (UNREP) with Japan's JS Towada.

About INS Kadmatt:

It is an indigenous stealth anti-submarine warfare corvette.

- It is the second of four anti-submarine warfare corvettes built for the Indian Navy by the Garden Reach Shipbuilders and Engineers of Kolkata under Project 28.
- It was commissioned into the Indian Navy in January 2016.
- The ship was inducted into the Eastern Naval Command of the Indian Navy.
- It has been named after the Kadmat Island of India's Lakshadweep Islands.
- The primary role of the INS Kadmatt is in anti-submarine warfare—to protect ships in convoys and ports from enemy submarine attacks.

Features:

- Length: 109 m (358 ft)
- Beam: 12.8 m (42 ft)
- Speed: 25 knots (46 km/h)
- Range: 3,450 mi (5,550 km) at 18 knots (33 km/h)
- Complement: 180 sailors and 13 officers
- The ship is fitted with state-of-the-art weapons, sensors, and machinery and is also designed to embark on the Sea king anti-submarine helicopter.
- The ship also has on-board early warning, navigation, and fire control radars, besides underwater sensors and integrated communication and electronic warfare systems.
- It produces low levels of radiated underwater noise, which reduces its chances of detection.
- It is equipped with anti-aircraft guns, torpedoes, and rocket launchers.

REPORTS AND INDICES

THE GDP SURPRISE: INDIA ON THE UP AND UP

- The Indian economy expanded by a staggering 7.6 per cent in the second quarter of the on going financial year. The economy has now grown at 7 per cent plus for two straight quarters.
- This raises a serious question over the accuracy of forecasts that have been continuously casting doubt on India's macroeconomic resilience post the pandemic.

Major Factor Behind the Growth Rate: Manufacturing Sector

- The manufacturing sector grew at a robust 13.9 per cent in the second quarter, compared to 4.7 per cent in the first quarter.
- Growth in the second quarter was at a nine-quarter high.

Contributing Factors to Manufacturing Uptick

- This uptick in manufacturing is triggered by a group of policy initiatives, ranging from steady government capital expenditure, the PLI scheme (ensuring export competitiveness in specific sectors).
- Also, the formalisation drive in both MSMEs (Udyam) and the labour force (e-shram), and the stabilisation in incremental credit deployment helped manufacturing sector and it gained momentum.

Analysis of Other Contributing Factors

Corporate Financial Health and Bottom-Line Growth

- The corporate books remain healthy, indicating stability and resilience in the business sector.
- The bottom line has shown impressive growth, recording a 31% increase in the second quarter, consistent with the robust 30% growth observed in the first quarter.
- The growth in the bottom line has outpaced the top-line growth, indicating effective cost management or increased efficiency in operations.
- This suggests that companies are not solely relying on increased revenue but are also

optimising their operations to enhance profitability.

Broad-Based Growth

- The growth observed is broad-based, indicating that various sectors within the corporate landscape are experiencing positive trends
- This diversified growth is a positive sign for overall economic health.
- Noteworthy Growth in FMCG Sector: The FMCG sector, often considered a barometer of rural consumption, reported a noteworthy 5% revenue growth.

Stellar Turnaround in Rural Demand

- The positive performance of the FMCG sector is indicative of potential improvements in rural demand and consumption trends.
- This shift is a positive signal for the broader economy, as rural areas are crucial contributors to overall economic activity.

Historic Capex Intentions

- In the fiscal year 2022-23, historic capex intentions have been witnessed, with new investment announcements reaching Rs 37 lakh crore.
- This marks a substantial increase from Rs 20 lakh crore in the previous fiscal year (2021-22), indicating a significant boost in planned capital expenditures.
- The surge in capex is notable for increased private sector participation, signalling confidence and active involvement from non-government entities in economic development.

THE LEADS [LOGISTICS EASE ACROSS DIFFERENT STATES] 2023 REPORT

- As many as 11 States and two UTs have been named as 'Achievers' in the LEADS [Logistics Ease Across Different States] 2023 report released by the Union Ministry of Commerce and Industry (MoC&I).

Logistics market in India:

- Logistics is the process of planning and executing the efficient transportation and storage of goods from the point of origin to the point of consumption.
- The goal of logistics is to meet customer

requirements in a timely, cost-effective manner. The worth of Indian logistics market is estimated at over USD 200 billion.

The sector provides livelihood to more than 22 million people.

Need for a wholistic logistics policy in India:

- The need for a national logistics policy was felt since the logistics cost in India is high as compared to other developed economies.
- It is imperative to reduce the logistics cost in India for improving the competitiveness of Indian goods both in domestic as well as export markets.
- Reduced logistics cost improves efficiency cutting across various sectors of the economy, encouraging value addition and enterprise.

Steps taken by govt to improve logistics market

National Logistics Policy:

- In order to facilitate a seamless flow of goods across India, Indian government launched a National Logistics Policy in September 2022.
- With the implementation of National Logistics Policy, there will be further boost to the development in an integrated logistics ecosystem, reduction in time, wastage & cost, and ensuring sustainability.

Other measures to improve logistics:

- The government had introduced PM GATI Shakti Master Plan in 2021.
- Under the plan, a digital platform is created to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.
- The government has also approved the development of 35 New Multi-Modal logistics Parks under Bharat Mala Pariyojana to reduce logistics cost.
- For promoting export, 40 air cargo terminals have been constructed. 30 airports have been provided cold-storage facilities.

INDIA SKILLS REPORT

- The India Skills Report 2024 highlights Kerala as the most preferred state to work in, based on the findings of a survey conducted by talent assessment agency Wheebox in

collaboration with various organizations such as the All India Council for Technical Education, Confederation of Indian Industry, and Association of Indian Universities.

Key points from the report

- **Top Cities for Employment:** Kochi and Thiruvananthapuram secured the second and fourth positions, respectively, among cities preferred for work by both men and women across all age groups.
- **National Employability Test:** The report is based on a National Employability Test conducted across the country, surveying 3.88 lakh youths. The findings indicate an improvement in employability in India, with 51.25% of the assessed youths found to be employable with the required skills.
- **Overall Employability:** Kerala secured the second position in overall employability among the 18-21 age group, emphasizing its position as a robust talent pool in the country.
- **Computer Skills:** Thiruvananthapuram claimed the first position among cities in nurturing computer skills, contributing to Kerala's third position overall among states in computer skills.
- **Diverse Skill Sets:** The report highlighted Kerala's well-rounded talent pool, showcasing excellence in various skills. Regions with diverse skill sets are considered better equipped to meet the demands of an evolving job market.
- **Talent Dispersion:** The study observed a trend of highly skilled individuals in various regions of Kerala migrating to the State capital, challenging the conventional notion that employability is confined to major urban centers.
- **Government Initiatives:** The report acknowledged the Kerala government's initiatives in skill training and development, particularly praising ASAP Kerala's impact in imparting skills to over 2.5 lakh higher secondary students in the last decade.
- **Skill Parks and Centers of Excellence:** Community skill parks and centers of excellence established by the agency (ASAP Kerala) were recognized as exemplary models for training in advanced technologies across the nation.

THE GLOBAL CLIMATE 2011-2020: A DECADE OF ACCELERATION

- "The Global Climate 2011-2020: A Decade of Acceleration" is a report published by the World Meteorological Organization (WMO).

World Meteorological Organization (WMO)

- The World Meteorological Organization (WMO) is an inter-governmental organisation with a membership of 193 Member States and Territories.
- It originated from the International Meteorological Organisation (IMO - a NGO), the roots of which were planted at the 1873 Vienna International Meteorological Congress.
- Established by the ratification of the WMO Convention on 23 March 1950, WMO became the specialised agency of the UN, responsible for promoting international cooperation on -
- Meteorology (weather and climate),
- Operational hydrology and
- Related geophysical sciences.

The WMO's Strategic Plan includes -

- Disaster risk reduction,
- The Global Framework for Climate Services (GFCS),
- The WMO Integrated Global Observing System (WIGOS),
- Aviation meteorological services,
- Polar and high mountain regions,
- Capacity development and Governance.
- The Secretariat, headquartered in Geneva, is headed by the Secretary-General and its supreme body is the World Meteorological Congress.
- WMO publishes - Greenhouse Gas Bulletin, Status of Global Climate, etc., reports

PANCHAYAT DEVELOPMENT INDEX

- The Union Minister of State for Panchayati Raj mentioned in Lok Sabha that the Panchayat Development Index (PDI) is a comprehensive tool to assess and monitor the development progress of Panchayats across the country.

About Panchayat Development Index (PDI)

- The PDI is a comprehensive assessment

tool developed by the Union Ministry of Panchayati Raj.

- The Index aimed at evaluating and measuring the progress made by grassroots-level institutions, specifically Panchayats, in achieving localized Sustainable Development Goals (SDGs) aligned with the broader UN Agenda for Sustainable Development by 2030.



Assessment Framework

- The PDI evaluates progress across themes, likely covering areas such as education, healthcare, infrastructure, environmental sustainability, etc.
- It uses 577 local indicators and 144 local targets to gauge development progress.
- 642 unique data points are utilized to monitor progress towards achieving these localized goals.

Performance Evaluation & Recognition

- **National Panchayats Award (NPA):** The best-performing Panchayats are incentivized through awards based on their performance in attaining SDGs. This initiative fosters healthy competition among Panchayats.
- **Thematic Scores & Composite PDI Score:** These scores enable an assessment of progress across the nine themes and provide an overall view of a Panchayat's development status.

Encouraging Development and Sharing Best Practices

- The PDI aims to motivate Panchayats to plan and work towards development goals, fostering a competitive spirit among them.
- Exemplary practices from well-performing Panchayats are shared and replicated in other areas through workshops, films, learning modules, visits, and setting up Panchayat Learning Centers.

INDIAN SOCIETY/SOCIAL ISSUES & JUSTICE/ CULTURE

KAMBALA RACE

- During the weekend of November 25 and 26, 160 pairs of buffaloes and their jockeys are set to race in the specially made slush tracks for Kambala races, being held at City Palace Grounds in Bengaluru.



Details

- Kambala is a traditional buffalo race that takes place in the coastal regions of Karnataka.
- The event is a unique and vibrant part of the local culture, deeply rooted in the agricultural traditions of the region.

Origin and History

- **Ancient Tradition:** Kambala has its roots in ancient farming practices where buffalo races were organized to thank the gods for a good harvest and to entertain the farming community.
- **Cultural Significance:** The event is not just a sport but also a cultural celebration that fosters a sense of community spirit and unity.

Event Structure

- **Buffalo Pairs:** Kambala involves pairs of buffaloes tethered to a plow-like device controlled by a handler, usually a farmer.
- **Racing Tracks:** The race takes place in muddy, water-filled tracks, often paddy fields, and the buffaloes are driven by the handlers who run alongside them.

Types of Kambala

- **Pookere Kambala:** In this type, the buffaloes are tied to a single plow, and the race is a straight dash.
- **Baare Kambala:** Here, the buffaloes are tied

to a wooden plank, and the race involves two pairs of buffaloes competing side by side.

Categories of Kambala

- Kambala is typically conducted in four categories:
- Negilu (Plough): Entry-level buffalo pairs participate using lighter ploughs.
- Hagga (Rope): Jockeys race buffaloes with only a rope tied to both animals.
- Adda Halage: Participants stand on a horizontal plank dragged by buffaloes.
- Kane Halage: A wooden plank tied to buffaloes, with water gushing out through holes as it is dragged. The winner is determined by the height of the splashing water.

Notable Kambala Events

- Kadri Kambala: One of the oldest and most popular Kambala events held near Mangalore.
- Kambala at Moodbidri: This event is known for its grandeur and attracts participants and spectators from all over Karnataka.

Recent happenings

- Banning of Kambala:
- In 2014, Kambala, along with Jallikattu and bullock-cart racing, faced a ban following petitions by organizations like People for the Ethical Treatment of Animals (PETA).
- The allegations included animal abuse, particularly the tying of buffalo noses with a rope and continuous whipping during races.

Lifting the Ban:

- In January 2016, the Environment Ministry issued a notification allowing an exception for the continuation of traditional events like Kambala, recognizing their cultural significance.
- State governments amended the Prevention of Cruelty to Animals Act to provide exemptions, subject to conditions aimed at ensuring the welfare of the animals.
- A five-judge constitutional bench upheld these amendments in May of the same year, allowing Kambala and similar traditional sports to resume under specific regulations.

HATTI COMMUNITY

- An organisation of the Hatti community in Himachal Pradesh will organise a protest march on December 16 to press their demand for the implementation of a law giving the Scheduled Tribe (ST) status to the community.

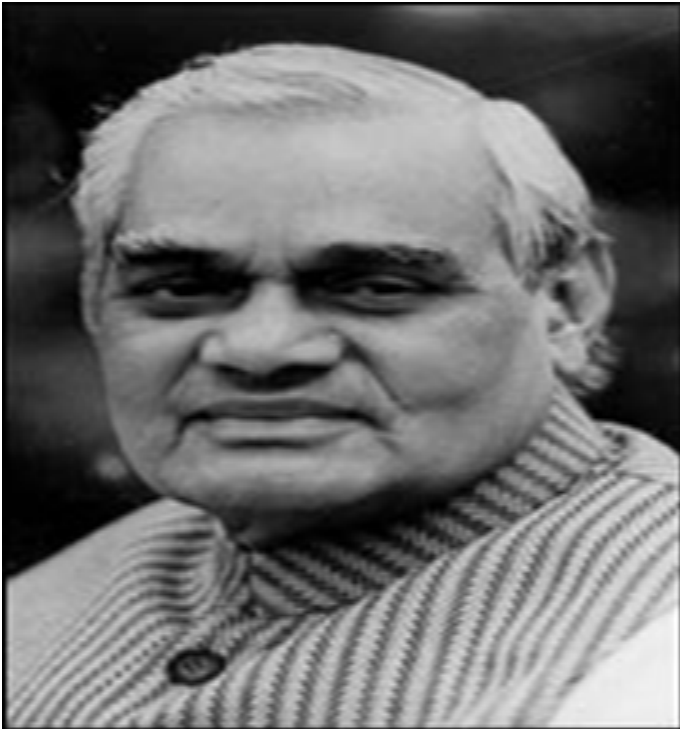


About the Hatti community:

- The Hattis are a close-knit community who take their name from their traditional occupation of selling home-grown crops, vegetables, meat, and wool at small-town markets known as 'haats'.
- Hatti men traditionally wear a distinctive white headgear on ceremonial occasions.
- The Hatti homeland straddles the Himachal-Uttarakhand border in the basin of the Giri and Tons rivers, both tributaries of the Yamuna.
- The Tons marks the border between the two states, and the Hattis living in the Trans-Giri area in today's Himachal Pradesh and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur. Jaunsar Bawar was conquered by the British in 1814.
- The two Hatti clans, in Trans-Giri and Jaunsar Bawar, have similar traditions, and inter-marriages are common.
- They are governed by a traditional council called 'khumbli' which decides community matters.
- According to the 2011 census, members of the community numbered 2.5 lakh but at present population of the
- Hattis are estimated at around 3 lakhs.

PERSONALITY OF THE MONTH

SHRI ATAL BIHARI VAJPAYEE



- A man of the masses, firm in his political convictions. On October 13, 1999, he took charge as Prime Minister of India for the second consecutive term at the head of a new coalition government, the National Democratic Alliance. He was Prime Minister for a short period in 1996. He is the first Prime Minister since Pandit Jawaharlal Nehru to have become Prime Minister of India with two successive mandates.
- A veteran Parliamentarian whose career stretches over four decades, Shri Vajpayee has been elected to the Lok Sabha (House of the People) nine times and to the Rajya Sabha (House of the States) twice, a record by itself.
- As India's Prime Minister, Foreign Minister, Chairperson of various important Standing Committees of Parliament and Leader of the Opposition, he has been an active participant in shaping India's post-Independence domestic and foreign policy.
- Shri Vajpayee's first brush with nationalist politics was in his student days, when he joined the Quit India Movement of 1942 which hastened the end of British colonial rule. A student of political science and law, it was in college that he developed a keen interest in foreign affairs – an interest he has

nourished over the years and put to skilful use while representing India at various multilateral and bilateral fora.

- Shri Vajpayee had embarked upon a journalist's career, which was cut short in 1951 when he joined the Bharatiya Jana Sangh, the fore-runner of today's Bharatiya Janata Party, the leading component of the National Democratic Alliance. A critically acclaimed poet, he still takes time off from affairs of state to indulge in music and in a bit of gourmet cooking.
- Born in the family of a humble school teacher on December 25 1924, in the erstwhile princely state of Gwalior (now a part of the Indian State of Madhya Pradesh), Shri Vajpayee's rise in public life is a tribute to both his political acumen and Indian democracy. Over the decades, he has emerged as a leader who commands respect for his liberal worldview and commitment to democratic ideals.
- An ardent champion of women's empowerment and social equality, Shri Vajpayee believes in a forward-looking, forward moving India, a strong and prosperous nation confident of its rightful place in the comity of nations. He stands for an India anchored in 5000 years of civilisational history, ever modernising, ever renewing, ever re-energising itself to meet the challenges of the next 1000 years.
- India's second highest civilian honour, the Padma Vibhushan, was conferred upon him in recognition of his selfless dedication to his first and only love, India, and his more than half-a-century of service to society and the nation. In 1994, he was named India's 'Best Parliamentarian.' The citation read: "True to his name, Atalji is an eminent national leader, an erudite politician, a selfless social worker, forceful orator, poet and litterateur, journalist and indeed a multi-faceted personality..Atalji articulates the aspirations of the masses.. his works ever echo total commitment to nationalism.

PRACTICE QUESTIONS

1. Consider the following statements regarding Exit Polls:

1. It is conducted after the completion of the voting process.
2. Only State run media is permitted to conduct Exit Polls.
3. The Election Commission has no powers with respect to Exit Polls.

How many of the above statements is/are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer: (B)

Explanation: Recently the exit polls were conducted in the 5 states such as Telangana, Madhya Pradesh, Rajasthan, Mizoram, and Chhattisgarh for the state assembly elections. An opinion poll is a pre-election survey to gather voters' views on a range of election-related issues. An exit poll is a post-election survey that is conducted immediately after people have voted and assesses the support for political parties and their candidates. It is conducted by various survey agencies.

The first exit poll in India was conducted in 1957 during the second Lok Sabha elections by the Indian Institute of Public Opinion. Exit poll results are very useful to the media to fill a bit of airtime before the announcement of the results. A well-run exit poll can be extremely accurate. In February 2010, restrictions were imposed only on exit polls through the introduction of Section 126(A) in the RPA. Election Commission has powers to regulate Exit Polls. Hence, statement 3 is not correct.

2. Consider the following statements, with reference to Piezoelectricity:

1. It is the process of using crystals to convert mechanical energy into electrical energy or vice versa.
2. Bone and tendons have the capacity to support Piezoelectricity.

Which of the above statements is/are correct?

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

Answer: (C)

Explanation: Piezoelectricity was discovered in 1880 by Pierre and Paul-Jacques Curie. Piezoelectricity is a phenomenon in which certain materials can generate an electric charge in response to mechanical stress. The certain materials include quartz, ceramics such as lead zirconate titanate (PZT) and even certain biological substances like bone and the tendons. Usually, the charges on atoms in the molecules that make them up are symmetric on two sides of an axis. But in certain materials when some stress is applied, the molecule becomes distorted and the asymmetry of charges gives rise to a small electric current. Some materials also display an inverse piezoelectric effect, where the application of an electric current induces a mechanical deformation. A piezoelectric crystal is placed between two metal plates. At this point, the material is in perfect balance and does not conduct an electric current. Mechanical pressure is then applied to the material by the metal plates, which forces the electric charges within the crystal out of balance. Excess negative and positive charges appear on opposite sides of the crystal face. The metal plate collects these charges, which can be used to produce a voltage and send an electrical current through a circuit. Both direct and inverse piezoelectric materials are widely used in pressure sensors, accelerometers, and acoustic devices, where their ability to convert mechanical signals

into electrical signals is crucial. The piezoelectric effect is also what made quartz watches so common and over time, affordable. Hence, both statements are correct.

3. Orbital Resonance, sometimes seen in the news, is related to which of the following statements?

- (A) A phenomenon that occurs when an object or system is subjected to an external force or vibration that matches its natural frequency.
- (B) It is any system of two or more satellites orbiting the same primary and whose orbital mean motions are in a ratio of small whole numbers.
- (C) A way of describing the bonding in certain molecules and polyatomic ions.
- (D) It is the time it takes for an object to return to the same point in its orbit.

Answer: (B)

Explanation: Orbital Resonance is any system of two or more satellites (including planets) orbiting the same primary and whose orbital mean motions are in a ratio of small whole numbers.

Astronomers have discovered an exceptionally rare phenomenon in a nearby star system where 6 planets that orbit their central star in sync with a rhythm. The six planets orbit a star called HD110067, which is about 100 light-years away from the Earth in the northern constellation of Coma Berenices. In this particular case, the planet closest to the star makes three orbits for every two of the next planet. This is called a 3/2 resonance and is repeated among the four closest planets. Multi-planet systems may be common in our galaxy, but ones in a tight gravitational formation known as "resonance" are rarely observed. Among the two outermost ones, a 4/3 resonance pattern was identified, meaning that one takes four orbits for every three of the outermost one. Hence, statement (b) is correct.

4. Consider the following passage:

It is a medieval fort located on the Arabian Sea off the coast of Maharashtra in western India. Chhatrapati Shivaji Maharaj of the Maratha Empire erected the fort. It covers 48 acres and has reinforced walls that are 29 feet high and 12 feet thick, stretching over two miles. A slab within the fort bears the Maratha King's handprint and footprint.

The above-mentioned passage refers to which one of the following forts?

- (A) Pratapgarh Fort
- (B) Sindhudurg Fort
- (C) Rajgarh Fort
- (D) Barabati Fort

Answer: (B)

Explanation: The Indian Navy is arranging a huge 'Operational Demonstration' on Navy Day at Sindhudurg Fort in Maharashtra to demonstrate its operational capabilities. It is a medieval fort located on the Arabian Sea off the coast of Maharashtra in western India. The stronghold is located on Kurte Island, along the shore of Malvan town in Sindhudurg District in Maharashtra's Konkan area, 450 miles south of Mumbai. The Maratha Empire's Chhatrapati Shivaji Maharaj built the fort. The construction of the fort began in 1664 and took three years to complete. It is spread over 48 acres with fortified walls that are 29 feet high and 12 feet thick and stretch for two miles. One can enter the fort through the Dilli Darwaja, the main gate. Because of its architectural design, the gate is visible only from close quarters and seems to be part of the walls. It is surrounded by several smaller forts, such as Padmagad, Rajkot, and Sarjekot Forts. A handprint and footprint of the Maratha King are embedded on a slab within the fort. A small temple dedicated to the Chhatrapati also finds a place within the bounds of the fort. Hence, option (b) is correct.

5. Consider the following statements regarding 'Gajraj Suraksha' technology:

1. It is introduced by the Ministry of Environment, Forest and Climate Change of India with the support of the Wildlife Trust of India.
2. It uses an AI-based algorithm and a network of sensitive optical fiber cables to detect elephants getting close to railway tracks.
3. It aims to address the issue of elephant fatalities resulting from train accidents.

How many of the above statements is/are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer: (B)

Explanation: Indian Railways has introduced a cutting-edge technology named 'Gajraj' to prevent elephant accidents on railway tracks. Hence, statement 1 is not correct.

It uses an AI-based algorithm and a network of sensitive optical fibre cables to detect elephants getting close to railway tracks. Hence, statement 2 is correct.

It aims to address the issue of elephant fatalities resulting from train accidents. Hence, statement 3 is correct.

Gajraj Suraksha senses pressure waves generated by the movement of elephants along the tracks. As elephants move, the optical fibres detect vibrations caused by their footsteps. These vibrations trigger signals within the optical fibre network, enabling the system to identify the presence of elephants up to 200 metres ahead of their arrival on the track. The OFC-based Intrusion Detection System works by sending alarms to station masters whenever movement is detected along the tracks. The network is designed in such a way that it can track the movement of the elephant with great accuracy and report it to nearby station masters. This allows them to promptly inform locomotive drivers in the affected areas. This quick communication ensures that trains can be slowed down or stopped, preventing potential collisions with elephants. Indian Railway is planning to introduce this system in West Bengal, Odisha, Jharkhand, Assam, Kerala, certain parts of Chhattisgarh, and Tamil Nadu.

6. With reference to White Hydrogen, consider the following statements:

1. It is a potential clean energy source naturally produced in the Earth's crust.
2. White hydrogen causes no CO₂ emissions when used as a fuel.
3. White hydrogen is cheaper than the cheapest hydrogen from fossil fuels and cheapest green hydrogen.

How many of the above statements is/are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer: (C)

Explanation: Recently, scientists found a huge stash of white hydrogen near the French-German border. White hydrogen is a naturally occurring gas found in the Earth's crust. It is also known as "natural," "gold," or "geologic" hydrogen. It is considered a potential clean energy source. It only produces water when it is burned. White hydrogen is 33% cheaper than the cheapest hydrogen from fossil fuels and 2 times cheaper than the cheapest green hydrogen. The deposit could contain between 6 million and 250 million metric tons of hydrogen. Scientists Jacques Pironon and Philippe De Donato initiated a mission in northeastern France to assess methane levels in the subsoils

of the Lorraine mining basin. The discovery and potential utilization of white hydrogen have a significant role in addressing the climate crisis. Hence, all statements are correct.

7. With reference to Cyclone Michaung, consider the following statements:

1. It is an extra-tropical cyclone that is tracking northwest in the western Bay of Bengal.
2. 'Michaung' is named after a suggestion provided by Bangladesh which means strength and resilience.

Which of the above statements is/are correct?

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

Answer: (D)

Explanation: Cyclone Michaung is a tropical cyclone that is tracking northwest in the western Bay of Bengal. 'Michaung' is named after a suggestion provided by Myanmar. It means strength and resilience. The National Crisis Management Committee (NCMC) recently convened to assess the readiness of State governments and Central Ministries for the approaching cyclone 'Michaung' in the Bay of Bengal. The India Meteorological Department (IMD) reported the storm's current location and projected path, indicating potential landfall on coastal Andhra Pradesh. The NCMC is a committee set up to coordinate and implement relief measures and operations in the wake of a natural calamity. The NCMC coordinates and oversees the response to major crises, emergencies, and disasters that may affect India. NCMC is headed by the Cabinet Secretary. Hence, both statements are not correct.

8. Consider the following statements regarding White Lung Syndrome:

1. White Lung Syndrome is identified through distinctive white patches observed on chest X-rays among affected children.
2. The syndrome is believed to arise from a combination of bacterial and viral factors excluding environmental factors.
3. This term encompasses various respiratory illnesses such as acute respiratory distress syndrome (ARDS), pulmonary alveolar microlithiasis (PAM) and silica-related conditions.

Which of the above statements is/are correct?

- (A) 1 and 2 only
- (B) 1 and 3 only
- (C) 3 only
- (D) 1, 2 and 3

Answer: (B)

Explanation: Recently, a respiratory illness named the White Lung Syndrome emerged in northern China and Ohio, USA, sparking concerns akin to those of a potential post-COVID-19 pandemic threat. White Lung Syndrome is identified through distinctive white patches observed on chest X-rays among affected children. This term encompasses various respiratory illnesses such as acute respiratory distress syndrome (ARDS), pulmonary alveolar microlithiasis (PAM) and silica-related conditions. The syndrome is believed to arise from a combination of bacterial, viral and environmental factors. Patients typically exhibit symptoms like cough, fever, runny nose, sinus congestion, difficulty breathing and fatigue. Treatment primarily targets managing pneumonia symptoms and ensuring optimal respiratory health. Hence, statement 2 is not correct.

9. Consider the following statements about the Global Partnership on Artificial Intelligence:

1. India is not a founding member of the Global Partnership on Artificial Intelligence (GPAI).
2. The Theme of the GPAI Summit 2023 is "Advancing Responsible AI in Private-Sector Applications"
3. This collaborative AI initiative involving various stakeholders seeks to address the gap between AI theory and practice.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer: (A)

Explanation: Launched in June 2020 with fifteen members, the Global Partnership in Artificial Intelligence is the realization of an idea conceived within the G7. This multi-stakeholder initiative aims to bridge the gap between AI theory and practice by supporting cutting-edge research and applied activities on AI-related priorities.

By uniting experts from science, industry, civil society, governments, international bodies, and academia, the initiative fosters international cooperation in artificial technology. The founding members include Australia, Canada, France, Germany, India, Italy, Japan, Mexico, New Zealand, the Republic of Korea, Singapore, Slovenia, the UK, the US, and the EU. Hence statement 1 is incorrect and Statement 3 is correct.

The Research Symposium, themed "Advancing Responsible AI in Public-Sector Applications," aims to unite global AI experts, academia, and practitioners. It's an opportunity to present actionable research fostering responsible AI, aligning with the broader goals of GPAI. Hence statement 2 is incorrect

10. Hatti Community is found in which States?

- (A) Himachal Pradesh
- (B) Himachal Pradesh and Uttarakhand
- (C) Sikkim
- (D) Arunachal Pradesh

Answer: (B)

Explanation: A Hatti community organization in Himachal Pradesh has recently announced a protest march scheduled for December 16. This close-knit community resides near the Trans-Giri area of Himachal Pradesh and Jaunsar Bawar in Uttarakhand, with the Tons River, a tributary of the Yamuna, serving as the border between the two states. Named after their traditional occupation of selling homegrown vegetables, crops, and meat, the Hattis are divided into two categories: Bhat and Khash, holding higher status, and Badhois, with lower status. This community in Himachal Pradesh's Sirmour district was officially added to the Scheduled Tribes (ST) list in 2022 after a prolonged demand for ST status since 1967. Hence Correct Answer is B.

Purpose of the magazine

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

The sources relied for selection and application of issues

The Hindu
The Indian Express
Times of India
PIB
Live Mint
Hindustan Times
News on Air
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Features of the magazine

Current Affairs Analysis

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

Practice Questions

- Prelims Practice Questions

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