

SROTHAS

A Monthly Magazine for UPSC Civil Service Examination

**CURRENT
AFFAIRS 2024
FEBRUARY**

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TOPIC FOR THE MONTH

POLITY & GOVERNANCE

1. Pradhan Mantri Bhartiya Jan Aushadhi Kendras

- Primary Agricultural Credit Societies (PACS) have been allowed by the Government to operate Pradhan Mantri Bhartiya Jan Aushadhi Kendras (PMBJK) under the Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana.
- PMBJK are set up under Pradhan Mantri Bhartiya Janaushadhi Pariyojana, which was launched by the Department of Pharmaceuticals, Ministry of Chemicals and Fertilisers in November 2008.
- Objective is to provide quality medicines at affordable prices for all, particularly the poor, so as to reduce out-of-pocket expenses in healthcare.
- These Kendra's provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy to expensive branded drugs.
- All therapeutic medicines are made available from Jan Aushadhi Stores.
- Jan Aushadhi stores also sell allied medical products commonly sold in chemist shops so as to improve the viability of running the Jan Aushadhi store.
- Pharmaceutical & Medical Devices Bureau of India (PMBI) has been established under the Department of Pharmaceuticals, Govt. of India, with the support of all the CPSUs for coordinating procurement, supply, and marketing of generic drugs through the PMBKs.

2. Constitution (J&K) ST Order (Amendment) Bill, 2024

- The Lok Sabha has passed the Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2024, aiming to include specific ethnic groups and tribes from Jammu and Kashmir into the list of Scheduled Tribes.
- The Union government has also introduced the Jammu and Kashmir Local Bodies Laws (Amendment) Bill, 2024 to provide reservation to Other Backward Classes (OBCs) in

panchayats and Municipal Bodies of Jammu and Kashmir.

- Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2024 particularly focuses on including four ethnic groups in the list of Scheduled Tribes (STs) in Jammu and Kashmir.
- The ethnic groups are "Gadda Brahmin, Koli, Paddari Tribe, and Pahari Ethnic Group".
- By extending Scheduled Tribe status to these communities, the bill intends to ensure their socio-economic and political empowerment.
- The bill ensures that the reservations for these existing communities such as Gujjars and Bakarwals remain unaffected while providing new reservations for the newly listed STs.
- Gujjars and Bakarwals are nomadic — they migrate with their livestock to the higher reaches in the summer, and return before the onset of winter.
- The bill is seen as a significant step towards inclusive development in Jammu and Kashmir, aligning with the government's commitment to the holistic development of all sections and communities under the "Sabka Sath, Sabka Vishwas" (Together with All, Trust of All) mantra.

3. Tribal Affairs Amendment Bills 2024



- Rajya Sabha has passed the Constitution (STs) Order Amendment Bill 2024 and the Constitution (SCs and STs) Order Amendment Bill 2024, presented by the Ministry of Tribal Affairs.
- Among the additions were notably seven Particularly Vulnerable Tribal Groups (PVTGs)

(a subset of STs) – four in Odisha and three in Andhra Pradesh.

- The independent names of these PVTGs had been specifically added as synonyms or sub-tribes of communities already on the ST lists of these States.
- In Odisha, the PVTG communities added are – Pauri Bhuyan and Paudi Bhuyan as synonyms of the Bhuyan tribe; The Chuktia Bhunjia as a synonym of the Bhunjia tribe; The Bondo as a sub-tribe of the Bondo Poraja tribe; and The Mankidia as a synonym for the Mankirdia tribe.
- In Andhra Pradesh, the PVTG communities included Bondo Porja and Khond Porja as synonyms of the Porja tribe and the Konda Savaras as a synonym for the Savaras tribe.
- These groups belong to PVTGs and have been included in the scheduled list after 75 years of independence.

4. Electoral Bonds



- The Supreme Court recently directed the State Bank of India to stop issuing electoral bonds immediately.
- Electoral bonds are interest-free bearer bonds or money instruments that can be purchased by companies and individuals in India from authorised branches of the State Bank of India (SBI).
- The bonds are similar to bank notes that are payable to the bearer on demand and are free of interest.
- These bonds are sold in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore. They can be purchased through a KYC-compliant account to make donations to a political party.
- EBs has a life of only 15 days during which it can be used for making donations to political parties.
- The name and other information of the donor are

not entered on the instrument and thus electoral bonds are said to be anonymous. There is no cap on the number of electoral bonds that a person or company can purchase.

- Under the Income Tax act, one's electoral bond donations are considered tax-exempt under Section 80 GG and Section 80 GGB.
- Only political parties registered under Section 29A of the Representation of the People Act, 1951 and which secured not less than 1% of votes polled in the last general election to the House of the People or the Legislative Assembly of the State, are eligible to receive electoral bonds.
- **Violation of the right to information** (Article 19(1)(a)): The scheme hides political party funding sources, compromising transparency and enabling black money, foreign funding, and corporate influence.
- **Breach of equality principle:** Discriminates among parties based on vote share, unfairly benefiting the ruling and major opposition parties, while excluding smaller and regional parties.

- **Contrary to constitutional electoral reform objectives:** Goes against efforts to curb corruption and criminalization in politics, conflicting with recommendations for transparency and disclosure in political funding by various committees and commissions.
- **Conflicts with the Representation of Peoples Act, 1951:** Fails to align with the Act's requirement for political parties to disclose contributions and expenditure, further undermining transparency in the political process.

5. Build-Operate-Transfer (BOT) Model

- The National Highways Authority of India (NHAI) has come up with a list of high-traffic density corridors for private developers to build and operate under the build-operate-transfer (BOT) model.
- Build-Operate-Transfer (BOT) Model is a type of agreement often used in infrastructure projects, particularly in the construction and operation of public facilities or utilities.

- It is a conventional public-private partnership (PPP) model in which a private entity (usually a company or consortium) is granted the rights and responsibilities to design, finance, construct, operate, and maintain a specific project or facility for a defined period of time.
- The private entity, known as the “concessionaire” or “developer,” bears the financial and operational risks associated with the project during the contract period.
- The private company gains revenue during the concession period, while the government benefits from infrastructure development without upfront investment.
- The specifics of the financial arrangements and incentives vary depending on the individual BOT contract.
- BOT is particularly well-suited for Greenfield projects (new projects without prior work) and large-scale, capital-intensive projects.

6. DigiReady Certification

- The Quality Council of India (QCI) and Open Network for Digital Commerce (ONDC) announced the launch of the DigiReady Certification (DRC) portal.
- DigiReady Certification aims to assess and certify digital readiness of Micro, Small, and Medium Enterprises (MSME) entities.
- The portal is meticulously designed to facilitate a streamlined seller journey, ensuring that MSMEs and small retailers can integrate seamlessly into existing digitised workflows.
- The certification process evaluates various aspects of digital readiness, including the presence of necessary documentation for online operations, proficiency in using software and technology, integration with existing digitised workflows, and efficient management of orders and catalogue offerings.
- This initiative presents additional business prospects for sellers, allowing them to become integral to the digital ecosystem.

7. Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana

- The Union Cabinet approved the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-

MKSSY), a sub scheme under the Pradhan Mantri Matsya Sampada Yojana.

- It will be implemented as a Central Sector Sub-scheme under the Central Sector Component of the PMMSY.
- Implemented at an estimated outlay of Rs.6,000 crore consisting of 50% i.e. Rs.3,000 crore public finance including the World Bank and the AFD external financing, and rest 50% i.e. Rs.3,000 crore being the anticipated investment from the beneficiaries/private sector leverage.
- It will be implemented for 4 years from FY 2023-24 to FY 2026-27 across all the States and UTs.
- Beneficiaries:
 - o Fishers, Fish (Aquaculture) Farmers, Fish workers, Fish Vendors or such other persons directly engaged in fisheries value chain.
 - o Micro and Small enterprises in the form of Proprietary Firms, Partnership Firms and Companies registered in India, Societies, Limited Liability Partnerships (LLPs), Co-operatives, Federations, Village Level Organizations like Self Help Groups (SHGs), Fish Farmers Producer Organizations (FFPOs) and Startups engaged in fisheries and aquaculture value chains.
 - o FFPOs also include Farmers Producer Organizations (FPOs).
 - o Any other beneficiaries that may be included by the Department of Fisheries, Gol as targeted beneficiaries.

8. Building an Inclusive Society through SMILE

- The Support for Marginalized Individuals for Livelihood and Enterprise (SMILE) scheme, aimed at advancing the vision of Viksit Bharat was initiated. This included the launch of the Central Sector Scheme for Comprehensive Rehabilitation for the Welfare of Transgender Persons.
- The two sub-schemes of SMILE – ‘Central Sector Scheme for Comprehensive Rehabilitation for Welfare of Transgender Persons’ and ‘Central Sector Scheme for Comprehensive Rehabilitation of engaged in the act of Begging’ – provide comprehensive welfare and rehabilitation

measures to the Transgender community and the people engaged in the act of begging.

- Scheme provides for the use of the existing shelter homes available with the State/UT Governments and Urban local bodies for rehabilitation of the transgender persons.
- In case of non-availability of existing shelter homes, new dedicated shelter homes are to be set up by the implementing agencies.
- Scheme is extensively on rehabilitation, provision of medical facilities, counselling, basic documentation, education, skill development, economic linkages and so on.

9. GROW Portal

- The “Greening and Restoration of Wasteland with Agroforestry (GROW)-Suitability Mapping” portal allows universal access to state and district-level data.
- It is hosted on the Bhuvan website.
- The GROW initiative aligns with national commitments, aiming to restore 26 million hectares of degraded land by 2030 and create an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent.
- The initiative, led by NITI Aayog, involved a collaborative effort from multiple institutions and employed advanced technologies such as remote sensing and GIS to assess agroforestry suitability across all districts in India.
- Utilising thematic datasets, the project resulted in the creation of an Agroforestry Suitability Index (ASI). This index enables national-level prioritisation for greening and restoration projects.
- This project on prioritisation of wasteland areas suitable for greening is based on the analysis of five remote sensing derived thematic layers land use, wasteland, slope, water proximity and soil organic content.
- These parameters were selected as a result of expert consultations and considered to be the most critical layers in identifying areas that are amenable to interventions with agroforestry. Highest weightage was given to wastelands.
- The developed system provides information on

areas suitable for agroforestry across India.

- The areas available in the system are classified as highly suitable, moderately suitable, and less suitable for agroforestry.

10. Kilkari Program and Mobile Academy



- The Central Government launched the Kilkari program and Mobile Academy in Maharashtra and Gujarat.
 - Kilkari offers weekly IVRS-based audio messages on reproductive, maternal, neonatal, and child health care (RMNCH).
 - Mobile Academy provides free audio training to ASHAs to enhance their knowledge and communication skills via mobile phones.
 - The initiative aims to strengthen public health infrastructure and provide citizen-centric health services leveraging mobile technology.
 - Kilkari is an IVR-based mobile health service delivering free, weekly audio messages about pregnancy, childbirth, and childcare directly to families' mobile phones.
 - It operates from the second trimester of pregnancy until the child is one year old.
 - Features include pre-recorded messages in the voice of a fictitious doctor character named Dr. Anita, centralized hosting by the Ministry of Health and Family Welfare, integration with the Reproductive Child Health portal, and availability in 18 states/UTs.
- ## 11. Water (Prevention and Control of Pollution) Amendment Bill, 2024
- The two houses of the Parliament recently

approved the Water (Prevention and Control of Pollution) Amendment Bill, 2024.

- The Water (Prevention and Control of Pollution) Act, 1974, has long been a cornerstone of India's environmental legislation to ensure sustainable management of water resources.
- Amendments in the Water Act are also necessary to make in line with the Air Act, as both laws contain similar provisions
- It focuses on decriminalising minor offences related to water pollution, alleviating fears of imprisonment for technical or procedural lapses.
- The rationale is to ensure penalties align with the severity of offences, promoting compliance without overly burdening stakeholders.
- The amended bill empowers the central government to exempt specific categories of industrial plants from certain statutory restrictions, such as those outlined in Section 25 regarding the establishment of new outlets and discharges.
- This provision intends to streamline regulatory processes and reduce duplication of surveillance efforts, and alleviate unnecessary burdens on regulatory agencies, promoting efficiency.
- It introduces measures to enhance regulatory oversight and standardisation across states.
- It grants the central government authority to prescribe guidelines for the nomination of chairpersons of State Pollution Control Boards and issue directives regarding the grant, refusal, or cancellation of industry-related consents.

12. SWAYAM and KHUSI Schemes: Odisha Govt

- The Odisha government has recently announced a one-time livelihood cash assistance of 1,000 for the families covered by the Public Distribution System (PDS) in the state.
- A new scheme called 'Swayam' was launched to provide interest-free bank loans of 1 lakh to rural unemployed youths aged 18-35 (18-40 for special category) to initiate new business ventures.
- The government expanded the existing KHUSI scheme, now called KHUSI+, to distribute belted sanitary napkins for institutional deliveries and

medical termination of pregnancy in government facilities, aiming to improve menstrual hygiene awareness and reduce maternal mortality and morbidity rates in the state.

Odisha boasts a high rate of 81.5% of women using hygienic menstrual protection, exceeding the national average, as per the National Family Health Survey 5.

13. Young Scientist Programme



- The Indian Space Research Organisation (ISRO) is set to conduct its special 'Young Scientist Programme' or 'YUVIKA' for school children.
- Young Scientist Programme (YUVIKA) is a learning and awareness-creating programme of the ISRO to impart basic knowledge on Space Technology, Space Science, and Space Applications to younger students with a preference for rural areas.
- The programme is aimed at creating awareness about the emerging trends in science and technology amongst the youngsters, who are the future building blocks of our nation. ISRO has chalked out this programme to "Catch Them Young".
- The programme is also expected to encourage more students to pursue Science, Technology, Engineering and Mathematics (STEM) based research/careers.
- Those who have finished class 8 and are currently studying in class 9 can apply for the programme.
- Three students from each state/Union Territory will participate in this programme every year, covering CBSE, ICSE, and state-board syllabus.
- Students belonging to the rural area have been given special weightage in the selection criteria.

14. Mission to Eradicate Filariasis: UP Government

- The Uttar Pradesh government led by Chief Minister Yogi Adityanath has launched a mission to eradicate filariasis from the state. As part of this, the government will conduct the Annual Mass Drug Administration (MDA) Campaign from February 5th to 15th, 2024.
- Filariasis is a disease caused by parasitic worms transmitted through mosquito bites.
- It can lead to conditions like swelling of limbs and genitals.
- The government aims to eliminate this disease from the country by 2027.
- The 15-day campaign will cover 17 districts in UP. These are Amethi, Azamgarh, Ballia, Banda, Barabanki, Bareilly, Hamirpur, Jaunpur, Jalaun, Lucknow, Pilibhit, Shahjahanpur, Prayagraj, Pratapgarh, Sonbhadra, Unnao, and Varanasi.
- Presently, 51 districts in UP are affected by filariasis. The MDA will expand to cover the rest of the districts from August 10, 2024
- Health workers will go door-to-door to administer preventive medication to all residents except children under 2 years, pregnant women and seriously ill people.

15. “Ungalai Thedi, Ungal Ooril” Scheme

- The government of Tamil Nadu has introduced guidelines for the “Ungalai Thedi, Ungal Ooril” (Come Look For You, In Your Village) outreach program, an initiative spearheaded by Chief Minister M.K. Stalin aimed at strengthening public services and scheme implementation across the state
- As part of the program, Collectors and senior district officials will spend 24 hours in one taluk (sub-district) every month to inspect infrastructure, review project functioning, and collect public feedback.
- Collectors have received instructions to map out annual calendars guaranteeing that all taluks receive monitoring visits
- Additionally, districts must heavily publicize visits so citizens can fully utilize officials' temporary presence.

16. GHAR (GO Home and Re-Unite) Portal

- GHAR – GO Home and Re-Unite Portal have been developed and launched by the National Commission for Protection of Child Rights (NCPCR).



- GHAR Portal is to digitally monitor and track the restoration and repatriation of children according to the protocols under the Juvenile Justice (Care and Protection of Children) Act, 2015, and Rules thereof.
- It has been developed and launched by the National Commission for Protection of Child Rights (NCPCR).
- Digital tracking and monitoring of children who are in the Juvenile Justice system and have to be repatriated to another Country/State/District.
- Digital transfer of cases of children to the concerned Juvenile Justice Board/Child Welfare Committee of the State. It will help in the speedy repatriation of children.
- Where there is a requirement of a translator/interpreter/expert, request will be made to the concerned State Government.
- Child Welfare Committees and District Child Protection Officers can ensure proper restoration and rehabilitation of children by digitally monitoring the progress of the case.
- List of Government implemented schemes will be provided, so that at the time of restoration, the Child Welfare Committees can link the child with the schemes to strengthen the family and ensure that the child remains with his/her family.

17. NITISH Device

- The Bihar State Disaster Management Authority has launched the Novel Initiative Technological Intervention for Safety of Human lives (NITISH) device, an innovative pendant-shaped technology designed to provide timely alerts to farmers and the public, specifically targeting lightning, floods, heatwaves, and coldwaves.

- The initiative was triggered by recurring deaths among farmers due to lightning and flash floods, emphasizing the device's role in saving lives.
- The NITISH Device is introduced in collaboration with the Indian Institute of Technology (IIT), Patna.
- The device is connected to the Bihar Meteorological Service Centre, ensuring real-time and accurate weather-related alerts.
- The NITISH device will sound an alert to its users half an hour before lightning or flooding.
- The pendant will get charged from body heat.
- The device will sound an alert in three ways: it will send voice messages; its colour will change from green to red; and the device will keep warming till its user switches it off.
- Considering the challenges faced by farmers, the device is waterproof, ensuring durability and functionality in various weather conditions.

18. Bharatiya Bhasha Samiti

- The Chairman of Bharatiya Bhasha Samiti advocated for the promotion of Indian languages in education and stated that textbooks will soon be available in Indian languages on digital platforms.
- It has been constituted by the Ministry of Education, Government of India in 2021.
- The mandate of this committee would be to explore and recommend pathways for the holistic and multidisciplinary growth of Indian languages as envisaged in the National Education Policy 2020.
- It has also been entrusted to advise the Ministry on all matters pertaining to the revitalization of existing language teaching and research and its extension in various institutions in the country.
- To perform the tasks assigned to it, the High-Powered Committee may appoint sub-committees/study groups.
- It may also interact and coordinate with any institution of the Central/State Government dealing with teaching, research, and extension/promotion of languages.
- Shri Lal Bahadur Shastri National Sanskrit University (SLBSNSU), New Delhi would

provide secretarial assistance and space to house the High-Powered Committee and meet the related expenditure as per the Government of India rules, regulations and instructions from time to time.

19. Vidyanjali Scholarship Programme

- The Union Minister of Education and Skill Development & Entrepreneurship recently launched the EdCIL Vidyanjali Scholarship Programme.
- This initiative guarantees access to high-quality learning systems by facilitating a seamless transition from secondary to higher education and extending financial support for the meritorious Navodaya Vidyalaya students who lack means.
- The Vidyanjali programme intends to garner assistance and funding from non-government partners and private sources such as CSR grants, national and international donors, and impact investors.
- The beneficiaries of the Vidyanjali programme in its initial phase will be students of grades XI and XII studying in Navodaya Vidyalayas across the country.
- A fintech platform has been specifically curated under Vidyanjali, and the sponsorship will be disbursed to students through this platform as Direct Benefit Transfer (DBT).
- This platform will be instrumental in capturing data, receiving, hosting, and viewing student applications, tracking student progress, tracking grant disbursement, monitoring fund utilisation, generating impact reports towards SDG realisation, individual mentions of notable student achievement, and publicly acknowledging the support of the funders, among other platform utilities.

20. SWATI Portal

- Principal Scientific Advisor to the Government of India launched "Science for Women-A Technology & Innovation (SWATI)" Portal.
- SWATI Portal is aimed at creating a single online portal representing Indian Women and Girls in STEMM (Science, Technology, Engineering, Mathematics & Medicine).
- The Portal is a complete interactive database; and

the first of its kind in India which is developed,

SWATI

Science For Women: A Technology & Innovation Portal



hosted and maintained by the National Institute of Plant Genome Research (NIPGR), New Delhi.

Objectives is To scale up the effort exponentially to include each and every Indian woman in science (WiS), across all career stages and subjects, spanning both Academia and the Industry enabling reliable and statistically significant long-term research on the issues of equality, diversity and inclusivity in India;

Inclusion of each and every Indian WiS, career stages, and subjects, spanning both Academia and the Industry; Enabling reliable and statistically significant long-term research on the issues of equality, diversity and inclusivity in India, developing active search engine and searchable database (Name, Affiliation, Area of Interest).

21. TN-SHORE Scheme: Tamil Nadu

The Tamil Nadu government has announced a new scheme called TN-SHORE, to revive the coastal resources and protect the endangered species in the 2024-2025 State Budget.

TN-SHORE, aims to enhance coastal biodiversity, and coastal protection, improve livelihoods of coastal communities, and control pollution in coastal areas.

The Tamil Nadu government also highlighted the Tamil Nadu Endangered Species Conservation Fund aimed at Endangered Species Conservation and the pursuit of Blue Flag certification for 8 beaches.

TN-SHORE (Neithal Meetchi Iyakkam) is announced to restore coastal resources across 14 districts, spanning 1,076 km, at an estimated cost of Rs 1,675 crore.

The scheme aims to enhance coastal biodiversity, and coastal protection, improve livelihoods of coastal communities, and control pollution in coastal areas.

The Blue Economy refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem.

The scheme will capitalise on the potential of the Blue Economy by focusing on the restoration of mangroves, coral reefs, and salt marshes, which are vital for the marine environment and the coastal economy.

The scheme will also help in achieving the Sustainable Development Goals (SDGs), especially SDG 14 (Life Below Water).

22. SAMARTH Centres

The Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) centres are set up under the Scheme for “Enhancement of Competitiveness in the Indian Capital Goods Sector.

These centres have been providing assistance to the MSMEs to train the workforce and make them aware of Industry 4.0 technologies in the following ways:

- o Organizing Seminars/ Workshops and knowledge-sharing events on Industry 4.0;
- o Training industries to create awareness about Industry 4.0;
- o Providing consultancy (in areas such as IOT Hardware, Software development, and data analytics) and incubation support to start-ups including MSMEs.

It has been launched by the Ministry of Heavy Industries to address technological obsolescence and limited access to quality industrial infrastructure and common facilities.

Phase I of the scheme fostered partnerships between Academia and Industry for engendering technology development with Government support.

The objective of Phase II is to expand and enlarge the impact created by the Phase I pilot scheme, thereby providing greater impetus through the creation of a strong and globally competitive

capital goods sector that contributes at least 25% to the manufacturing sector.

23. E-Jagriti Portal

- The Consumer Affairs Department has integrated artificial intelligence in the 'e-Jagriti' portal, aiming to reduce pending cases in consumer courts.
- The e-Jagriti portal, an initiative by the Department of Consumer Affairs under the Ministry of Consumer Affairs, Food, and Public Distribution, aims to streamline consumer dispute resolution.
- It integrates various consumer grievance platforms and offers features like case filing, online fee payment, and AI-powered smart search.
- The portal also includes a Virtual court facility for resolving complaints conveniently.
- National Consumer Dispute Redressal

Commission (NCDRC) was established in 1988 under the Consumer Protection Act and is a quasi-judicial body with jurisdiction over complaints exceeding two crores.

- It is headquartered in New Delhi and headed by a sitting or retired Judge of the Supreme Court or a Chief Justice of a High Court.
- Appeals against NCDRC orders can be made to the Supreme Court within 30 days.

ECONOMY

1. Payments Bank: Restriction

- The Reserve Bank of India (RBI) recently imposed restrictions on Paytm Payments Bank Ltd (PPBL), following a system audit report and subsequent compliance validation report of external auditors.
- A payments bank is like any other bank but operates on a smaller scale without involving any credit risk.
- It was set up based on the recommendations of the Nachiket Mor Committee.
- Objective is to advance financial inclusion by offering banking and financial services to the unbanked and under banked areas, helping the migrant labour force, low-income households, small entrepreneurs, etc.
- It is registered as a public limited company under the Companies Act 2013 and licensed under Section 22 of the Banking Regulation Act 1949.
- It is governed by a host of legislation, such as the Banking Regulation Act, 1949; RBI Act, 1934; Foreign Exchange Management Act, 1999, etc.

2. India's Core Industries Performance

- The combined Index of Eight Core Industries (ICI) in India exhibited a provisional growth of 3.8% in December 2023 compared to 2022. Except crude oil, all other sectors have majorly performed well.
- The ICI serves as a crucial metric, encompassing Cement, Coal, Crude Oil, Electricity, Fertilizers, Natural Gas, Refinery Products, and Steel, collectively constituting 40.27% of the Index of Industrial Production (IIP).
- IIP is a prime indicator of economic development for the measurement of trends in the behaviour of Industrial Production over a period of time with reference to a chosen base year.
- Current base year for the IIP in India is 2011-12.

3. Three Initiatives Aimed At Bolstering Crop Insurance

- The Agriculture Minister recently launched three initiatives aimed at bolstering crop insurance and supporting farmers in India.

- The initiatives include the Kisan Rakshak Helpline 14447 and Portal, the Agri-Insurance Sandbox Framework Platform SARTHI, and a Learning Management System (LMS) Platform.
- SARTHI Developed in collaboration with UNDP India Provides a comprehensive suite of insurance products tailored for farmers and rural India Simplifies the insurance process Offers digital payment options
- Krishi Rakshak Portal and Helpline (KRPH) 14447 Aims to address farmers' grievances transparently – Provides real-time assistance
- LMS Platform Facilitates training and knowledge-sharing for stakeholders implementing agricultural schemes like PMFBY, MIIS, and KCC
- These initiatives aim to empower farmers technically and digitally, aligning with the government's vision to transform India's agriculture sector.

4. Interim Union Budget of India 2024-25

- The Finance Minister, Smt. Nirmala Sitharaman delivered the Union Budget for the fiscal year 2024-25 in the new Parliament Building on February 1, 2024. This budget presentation represents her sixth consecutive budget, following those of 2019, 2020, 2021, 2022, and 2023.
- Finance Minister Nirmala Sitharaman mentioned the goal of making India 'Viksit Bharat' by 2047 and emphasized the focus on inclusive development with the motto "Sabka Sath, Sabka Vikas".
- The government's efforts are aimed at creating a developed and prosperous India in the years to come.
- Finance Minister Nirmala Sitharaman outlined the government's focus on four major groups: the poor, women, youth, and farmers.
- She highlighted the impact of the PM Janman Yojana, specifically aiding tribal groups that have historically been outside the realm of development.

- Sitharaman stated that the government has assisted 25 crore people in breaking free from poverty over the last decade, emphasizing the commitment to uplifting various sections of the population.
- Finance Minister Nirmala Sitharaman highlighted the impact of Goods and Services Tax (GST), stating that it has enabled ‘one nation, one market, one tax.’
- She emphasized that tax reforms have led to the deepening and widening of the tax base.
- Sitharaman also mentioned the government’s focus on comprehensive governance, development, and performance, represented by ‘GDP’ (Governance, Development, Performance). This underscores the government’s commitment to holistic and impactful policies for the nation’s growth.
- The government aims to provide 1 crore households with 300 units of free electricity per month through rooftop solarization. This move emphasizes the promotion of clean and sustainable energy.
- The benefits of Ayushman Bharat, a health insurance scheme, will be extended to all Accredited Social Health Activists (ASHA) and Anganwadi workers.
- This step is aimed at providing health coverage to those involved in grassroots healthcare.
- The government will assist “deserving” sections of the middle class in building their own houses.
- This initiative aims to address housing needs and promote homeownership among the middle class.
- The establishment of a corpus of 1 lakh crore through a 50-year interest-free loan.
- This corpus is intended to provide long-term financing with extended tenure and minimal or no interest rates.
- The measure aims to support specific sectors or initiatives that require sustained financial assistance for their development.
- Finance Minister Nirmala Sitharaman emphasized a shift in the meaning of FDI to “First Develop India.”
- She highlighted the focus on encouraging bilateral trade treaties to boost Foreign Direct Investments (FDIs) in the country.
- This signals an intention to attract more investments that contribute to the development and growth of India’s economy.
 - o FY24 fiscal deficit seen at 5.8% of GDP
 - o FY24 total expenditure revised to 44.90 lakh crore
 - o FY 24 total receipts other than borrowings is 27.56 lakh crore
 - o FY24 tax receipts are 23.24 lakh crore
 - o FY25 fiscal deficit seen at 5.1%
 - o Aim to reduce fiscal deficit to below 4.5% by FY26
 - o FY25 gross market borrowing seen at 14.13 lakh crore
- Finance Minister Nirmala Sitharaman announced that there will be no proposals to change tax rates, whether direct or indirect.
- She also mentioned the extension of tax benefits for startups and investments made by sovereign wealth and pension funds until March 2025.
- Furthermore, the withdrawal of outstanding direct tax demands up to 25,000 for the period up to the financial year 2009-10, and up to 10,000 for financial years 2010-11 to 2014-15, was announced.
- This move is expected to benefit around one crore taxpayers, providing them with relief from outstanding tax liabilities.
- New Scheme for Strengthening Deep-Tech Technologies for Defence Purposes: A new scheme focusing on enhancing deep-tech technologies for defense purposes.
- Capital expenditure has been increased by 11.1% to over 11.18 lakh crore, which represents 3.4% of the GDP.
- Conversion of Rail Bogies to Vande Bharat Standards: 40,000 normal rail bogies will be converted to Vande Bharat standards, aiming to improve and modernize the railway infrastructure.
- 2 Crore More Houses Under PM Awas Yojana: The government aims to build 2 crore more houses in the next five years under the Pradhan Mantri Awas Yojana, focusing on affordable housing.

5. Focus On Inflation Control: RBI



- The RBI's Monetary Policy Committee (MPC) maintains its focus on curbing inflation by keeping the repo rate unchanged at 6.5% in February 2024 to align inflation with the 4% target.
- The MPC aims to achieve a medium-term target of 4% inflation within a band of +/- 2%.
- The MPC aims to withdraw accommodation gradually to align inflation with the target while supporting growth.
- An accommodative stance means the central bank is prepared to expand the money supply to boost economic growth.
- Withdrawal of accommodation will mean reducing the money supply in the system which will rein in inflation further.
- A recent RBI Bulletin states that Headline inflation rose to 5.7% in December 2023, primarily driven by food inflation, emphasising the need for continued vigilance.
- The MPC determines the policy interest rate required to achieve the inflation target.
- The RBI controls inflation and deflation by employing a variety of monetary policy tools such as Repo rate, Reverse repo rate, Bank rate, Open market operations, Statutory liquidity ratio (SLR), Cash reserve ratio (CRR), Liquidity adjustment facility (LAF), and Market stabilization scheme.

6. Ongoing Disinflation: RBI

- Reserve Bank of India (RBI) governor recently said recurring food price shocks and renewed flash points on the geo-political front pose a challenge to the ongoing disinflation process.
- Disinflation is a decrease in inflation rates.

- A decline in the rate of increase in the general price level of goods and services in the gross domestic product (GDP) of a country over time is called disinflation.
- Unlike inflation and deflation, which refer to the direction of prices, disinflation refers to the rate of change in the rate of inflation.
- Disinflation is not considered problematic because prices do not actually drop, and disinflation does not usually signal the onset of a slowing economy.
- A healthy amount of disinflation is necessary since it represents economic contraction and prevents the economy from overheating.
- Disinflation is considered the opposite of reflation, which occurs when a government stimulates an economy by increasing the money supply.
- Cause of Disinflation: If a central bank wants to enforce a tighter monetary policy and the government starts selling off some of its assets, the supply of money in the economy could be limited, causing a disinflationary effect.

7. Debt Recovery Tribunal

- The Debts Recovery Tribunals (DRTs) and Debts Recovery



- Appellate Tribunals (DRATs) were established under the Recovery of Debts and Bankruptcy Act (RDB Act), 1993.
 - These are established to provide expeditious adjudication and recovery of debts due to Banks and Financial Institutions.
 - At present, 39 Debts Recovery Tribunals (DRTs) and 5 Debts Recovery Appellate Tribunals (DRATs) are functioning across the country.
 - Each DRT and DRAT are headed by a Presiding Officer and a Chairperson respectively
- ## 8. Rebate of State and Central Taxes and Levies (RoSCTL) Scheme
- The Union Cabinet approved the continuation of the Scheme for Rebate of State and Central Taxes

and Levies (RoSCTL) for the export of Apparel/ Garments and made up to 31st March 2026.

- Rebate of State and Central Taxes and Levies (RoSCTL) Scheme aims to reimburse all embedded State and Central Taxes/Levies for exports of manufactured goods and garments.
- It has been established as a successor for the old “Rebate of State Levies (RoSL) Scheme.
- The difference between RoSL & RoSCTL Scheme is that under the RoSL Scheme, there was no benefit on the central tax and Levies.
- But in the RoSCTL scheme, the exporter will get a rebate of both State and Central tax and Levies.
- Objective is to compensate for the State and Central Taxes and Levies in addition to the Duty Drawback Scheme on the export of apparel/ garments and Made-ups by way of rebate.
- The rebate under the Scheme shall be in the form of duty credit scrips.
- The scrips shall be issued electronically on the Customs system.
- The duty credit scrips shall be used for payment of Basic Customs Duty on import of goods.
- These scrips shall be freely transferable.
- The duty credit available in an e-scrip shall be transferred at a time for the entire amount in the said e-scrip to another person and transfer of the duty credit in part shall not be permitted.
- The period of validity of the e-scrip, of one year from its creation, shall not change on account of the transfer of the e-scrip.
- All exporters of garments/Apparel and made-ups manufactured in India are eligible to take benefit under this scheme, except entities/ IECs under the Denied Entity List of the Directorate General of Foreign Trade (DGFT).
- It has been notified by the Ministry of Textiles. However, the scheme shall be implemented by the Department of Revenue.

9. Animal Husbandry Infrastructure Development Fund

- The Union Cabinet chaired by the Prime Minister of India approved the continuation of the Animal Husbandry Infrastructure Development Fund



(AHIDF) to be implemented under the Infrastructure Development Fund (IDF) for another three years up to 2025-26.

- Animal Husbandry Infrastructure Development Fund is a Central Sector Scheme.
- It has been approved for incentivizing investments by individual entrepreneurs, private companies, MSME, Farmers Producers Organizations (FPOs) and Section 8 companies to establish
 - o the dairy processing and value-addition infrastructure
 - o meat processing and value addition infrastructure and
 - o Animal Feed Plant.
- Objectives is :
 - o to help increase milk and meat processing capacity and product diversification thereby providing greater access for unorganised rural milk and meat producers to organised milk and meat markets.
 - o To make available increased price realisation for the producer.
 - o to make available quality milk and meat products for the domestic consumer.
 - o to promote exports and increase the export contribution in the milk and meat sector.
 - o to make available quality concentrated animal feed to the cattle, buffalo, sheep, goat, pig and poultry to provide balanced ration at affordable prices.
- The government of India will provide a 3% interest subvention for 8 years including two years of moratorium for loans up to 90% from the scheduled bank and National Cooperative Development Corporation (NCDC), NABARD and NDDB.

10. Employee Rating Survey

- The Employees' Provident Fund Organisation (EPFO) and the Ministry of Women and Child Development (MoWCD) have jointly launched the Employer Rating Survey to assess and encourage employers' support for increasing women's participation in the workforce.
- The employer rating survey was launched at an event "Women in the Workforce for Viksit Bharat" by the EPFO (Ministry of Labour and Employment) and the MoWCD.
- The survey's data and feedback from female employees aim to offer valuable insights for informed policymaking on women's workforce participation.
- The primary objective of the survey is to evaluate and rate employers based on their commitment and support for women's participation in the workforce.
- This involves assessing the measures and facilities provided by employers to create an environment conducive to women's employment.
- It serves as a tool to gauge the progress and efforts of employers in creating an inclusive work environment.
- The survey has a detailed questionnaire seeking organisation details, including whether the company provides an Internal Complaints Committee for addressing Prevention of Sexual Harassment (POSH) formalities, crèche facilities for children, and transportation facilities during late hours.
- The EPFO has distributed the questionnaire to its approximately 300 million customers nationwide, making it a comprehensive effort to gather data on a large scale.
- The survey has also sought answers on whether there is 'equal pay for equal work' for male and female workers along with a query on the availability of flexible or remote working hours for women.

11. C- CARES

- The Union Minister of Coal, Mines and Parliamentary Affairs launched a web portal of Coal Mines Provident Fund Organization (CMPFO) namely C- CARES.

- C- CARES Portal is developed and designed by the Centre for Development of Advanced Computing (C-DAC).
- The portal, will allow CMPF subscribers and coal companies to login and perform various functions tailored to their needs.
- While the subscribers can access and view their individual details and subscription status, the coal management can submit contribution details, subscribers' particulars and claims for online settlement and payment through the portal.
- It will also ensure paperless working, timely and accurate settlement of claims, reduction in processing time and grievance redressal.
- The portal being a public service platform is intended to benefit the CMPF subscribers who are working in the coal sector as well as its pensioners.

12. Wheat Blast

- Researchers who have modeled for the first time how wheat blast will spread in the future found the fungal disease could reduce global wheat production by 13% until 2050.
- Wheat blast, caused by the plant fungus *Magnaporthe oryzae*, is a fast-acting, severe disease of wheat that causes bleaching of the heads.
- *Magnaporthe oryzae* can infect many grasses, including barley, lolium, rice, and wheat, but specific isolates of this pathogen generally infect limited species; that is, wheat isolates infect preferably wheat plants but can use several more cereal and grass species as alternate hosts.
- It spreads through infected seeds, crop residues, and spores that can travel long distances in the air. It thrives in warm and humid conditions, making regions with such climates particularly susceptible.
- The pathogen is also resistant to fungicides.
- The seriousness of the disease is indicated by the fact that crops are burned to avoid this disease. It causes progressive bleaching of the heads, lower yields, and poor seed quality.
- Stems and leaves are discoloured, with dark brown, eye-shaped lesions on leaves. Sometimes

dark grey spores can be seen. It can shrivel and deform the grain in less than a week from the first symptoms.

13. Sovereign Gold Bond (SGB) Scheme: Next Price Fixed

- The issue price of the next tranche of Sovereign Gold Bond has been fixed at Rs 6,263 per gram, the Reserve Bank said in a statement recently.
- Sovereign Gold Bond (SGB) Scheme are government securities denominated in grams of gold.
- The SGB Scheme was first launched by the Government of India (GOI) on October 30, 2015.
- They are substitutes for holding physical gold. Investors have to pay the issue price, and the bonds will be redeemed upon maturity.
- The bond is issued by the Reserve Bank on behalf of the GOI.
- The bonds will be restricted for sale to resident Indian entities, including individuals (in their capacity as individuals, or on behalf of the minor child, or jointly with any other individual), Hindu Undivided Family (HUF), Trusts, Universities and Charitable Institutions.
- The bonds are issued in denominations of one gram of gold and in multiples thereof.
- The minimum investment in the bond shall be one gram, with a maximum subscription limit of 4 kg for individuals, 4 kg for HUFs, and 20 kg for trusts and similar entities notified by the government from time to time per fiscal year.
- In the case of joint holding, the investment limit of 4 KG will be applied to the first applicant only.
- The tenor of the bond will be for a period of 8 years, with an exit option in the 5th, 6th, and 7th years, to be exercised on the interest payment dates.



14. Fund of Funds Scheme

- According to a Crisil assessment called Prabhaav, the Fund of Funds for Startups (FFS) scheme has

enabled investments to the tune of around 4x of



the amount drawn with Rs 17,534 crore invested in 938 startups.

- The Fund of Funds for Startups (FFS) Scheme was approved and established in 2016 with a corpus of Rs 10,000 crore,
- Under FFS, the Scheme does not directly invest in startups, instead provides capital to SEBI-registered AIFs, known as daughter funds, who in turn invest money in growing Indian startups through equity and equity-linked instruments.
- Small Industries Development Bank of India (SIDBI) has been given the mandate of operating this Fund through selection of suitable daughter funds and overseeing the disbursement of committed capital.
- AIFs supported under FFS are required to invest at least 2 times of the amount committed under FFS in startups.

15. e-NAM: Surge FY2024

- e-NAM sales show surge in FY2024.
- The total traded value of commodities on the digital platform using the farmgate model during April – January, 2023-24 has been Rs 79 crore compared to a very small amount traded last fiscal.
- eNAM platform is an online trading platform for agricultural commodities in India.
- It was launched in 2016 as a pan-India electronic trade portal linking agricultural produce market committees (APMCs) across all states.
- It was launched with the objective of integrating the existing Mandis into a “One Nation One Market” for agricultural commodities in India.
- It facilitates farmers, traders, and buyers with online trading in commodities.

- It provides for contactless remote bidding and mobile-based anytime payment for which traders do not need to either visit mandis or banks for the same.
- Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing e-NAM.
- It functions under the aegis of the Ministry of Agriculture and Farmers' Welfare.

16. Guidelines on State Guarantees on Borrowings: RBI

- A Working Group constituted by the Reserve Bank of India (RBI) has made certain recommendations to address issues relating to Guarantees extended by State governments.
- The term Guarantee should be used in a broader sense and include all instruments if they create an obligation on the guarantor (State) to make a payment on behalf of the borrower at a future date.
- Further, it must make any distinction between conditional or unconditional, or financial or performance guarantees in order to assess the fiscal risk.
- These are conditional liabilities that may present a potential risk in the future.
- The government guarantees should not be used to obtain finance through State-owned entities, which substitute budgetary resources of the State Government.
- Additionally, they should not be allowed to create direct liability/de-facto liability on the State.
- There should be adherence to Government of India guidelines that stipulate that guarantees be given only for the principal amount and normal interest component of the underlying loan.
- Guarantees must not be extended for External Commercial Borrowings, must not be extended for more than 80% of the project loan (depending on the conditions imposed by the lender) and must not be provided to private sector companies and institutions.
- Appropriate preconditions such as the period of guarantee, levy of (guarantee) fee to cover risk, government representation on the management board of the borrowing entity, and right to audit, etc, must be specified.

- The Group recommends that States assess the risk associated with guarantees by categorising them as high, medium, or low risk, taking into account the entity's past default history.
- The methodology used for assigning these risk weights should be transparent and disclosed.
- Based on the risk assessment minimum guarantee fee must be set at a minimum of 2.5% per annum.
- The report emphasises that invoking a guarantee could impose considerable fiscal strain on the state government.
- To mitigate potential stress, the Group proposes imposing a ceiling on guarantees, limiting them to 5% of Revenue Receipts or 0.5% of Gross State Domestic Product (GSDP), whichever is lower.
- The Group recommends that the RBI should suggest banks/NBFCs to disclose the credit given to State-owned entities with State-government guarantees.
- The report emphasises the need for a comprehensive database to track extended guarantees, proposing the creation of a unit at the State level for this purpose.
- The report highlights that delays in honoring guarantees could harm the State government's reputation and pose legal risks.
- It advises States to be cautious when providing finance to entities with a history of not meeting commitments.
- The report emphasizes the importance of promptly honoring guarantees to maintain credibility with lenders and investors

17. RBI Payment Aggregator Approval

- The Reserve Bank of India has granted final authorization for three more companies – Juspay, Decentro, and Zoho – to operate as payment aggregators in India.
- This approval allows these companies to provide payment services to online merchants by accepting payments from customers.
- Juspay, Decentro, and Zoho join Stripe, Zomato, and Tata Pay, who received approval in January 2023. Major fintech players like Razorpay and

Cashfree received the license in 2022.

- This makes a total of 8 companies so far that have secured the coveted payments aggregator license from the RBI.
- A payments aggregator license allows companies to offer payment services to online businesses and e-commerce companies.
- As payment aggregators, these companies can accept payments from customers on behalf of merchants and pool the funds before transferring them to merchants after a set period of time.

18. Inheritance Tax: Oxfam Report

- Oxfam report says that 70% of countries don't have any form of inheritance tax on wealth.
- The report comes on the backdrop of increased inequalities in income, wealth and possession of resources.
- Inheritance tax that was levied against a particular asset during the time of its inheritance.
- It comes under direct tax and a person can receive inheritance either under a will or under the personal law of the deceased.
- The Inheritance or Estate Tax was abolished with effect from 1985.
- In India, the concept of levying tax on inheritance does not exist now.
- In the event of the death of an individual, properties belonging to the deceased would pass on to his legal heirs, a transfer without any consideration in return. Hence, it could qualify as a gift for income tax.
- The Income Tax Act, of 1961, specifically excludes the transfer of assets under will or inheritance from the purview of gift tax.
- The person receiving the inheritance has to pay tax on the income earned (rent, interest, etc.) in respect of the assets inherited by him once he becomes the owner of the same.
- The person has to pay capital gains tax when he sells the inherited asset.

19. Retail Inflation

- India's retail inflation eased to a three-month low of 5.1% recently.
- Retail inflation, also known as Consumer Price

Index (CPI) inflation, tracks the change in retail prices of goods and services which households purchase for their daily consumption.

- CPI is calculated for a fixed basket of goods and services that may or may not be altered by the government from time to time.
- The change in the price index over a period of time is referred to as CPI-based inflation or retail inflation.
- CPI is calculated as a percentage.
- It is a comparison of the general price level in the markets in a particular time period from a time frame in the past.
- This is known as the base year.

20. Minimum Support Price: Protest

- Farmers from Punjab, Haryana, and Uttar Pradesh are marching towards Delhi in the 'Delhi Chalo' protest, demanding legal guarantees for the Minimum Support Price (MSP).
- The headline demand in the farmers' 12-point agenda is for a law to guarantee Minimum Support Price (MSP) for all crops, and the determination of crop prices in accordance with the Dr M S Swaminathan Commission's report.
- The Swaminathan Commission Report states that the government should raise the MSP to at least 50% more than the weighted average cost of production. It is also known as the C2+ 50% formula.
- It includes the imputed cost of capital and the rent on the land (called 'C2') to give farmers 50% returns.
- Imputed cost is used to account for the opportunity cost of using resources like land, labour, and capital.
- The imputed cost of capital accounts for the interest or returns that could have been earned if the capital invested in farming were instead invested elsewhere
- Minimum Support Price: MSP is the guaranteed amount paid to farmers when the government buys their produce.
- MSP is based on the recommendations of the Commission for Agricultural Costs and Prices (CACP), which considers various factors such

as cost of production, demand and supply, market price trends, inter-crop price parity, etc.

- CACP is an attached office of the Ministry of Agriculture and Farmers Welfare. It came into existence in January 1965.
- The Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister of India takes the final decision (approve) on the level of MSPs.
- The MSP is aimed at ensuring remunerative prices to growers for their produce and encouraging Crop Diversification.
- The CACP recommends MSPs for 22 mandated crops and fair and remunerative price (FRP) for sugarcane.
- The mandated crops include 14 crops of the kharif season, 6 rabi crops and 2 other commercial crops.

21. Open Network Digital Commerce

- The Centre has on boarded 11 fair price shops on the state-run e-commerce portal Open Network Digital Commerce (ONDC).
- It is an open-source network set up to enable buyers and sellers to transact with each other



irrespective of the e-commerce platform on which either of them are registered.

- It will enable local commerce across segments, such as mobility, grocery, food order and delivery, hotel booking and travel, among others, to be discovered and engaged by any network-enabled application.
- It is an initiative of the Department for Promotion of Industry and Internal Trade(DPIIT) under the Ministry of Commerce and Industry.
- Purpose is to promote open networks for all aspects

ENVIRONMENT

1. World Sustainable Development Summit (WSDS) 2024

- The Vice-President inaugurated the World Sustainable Development Summit in New Delhi recently.
- World Sustainable Development (WSDS) Summit is the annual flagship event of the Energy and Resources Institute (TERI).
- Instituted in 2001, the Summit series has a legacy of over two decades of making 'sustainable development' a globally shared goal.
- It is the only independently convened international summit on sustainable development and environment, based in the Global South.
- WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform.
- WSDS 2024 is the 23rd edition of the summit.
- WSDS 2024 will take place on the theme 'Leadership for the Sustainable Development and Climate Justice'.

2. Rollapadu Wildlife Sanctuary: Great Indian Bustard Spotted



- The Great Indian Bustard (GIB) has not been spotted at the Rollapadu Wildlife Sanctuary in Nandyal district of Andhra Pradesh and its surrounding areas for the last couple of years, which is an indication that the bird is at risk of local extinction.

- Rollapadu Wildlife Sanctuary is located in the state of Andhra Pradesh.
- It lies between the Nallamala and Yerramalla hill ranges of the Eastern Ghats.
- It was declared a sanctuary in 1988 to protect the dwindling populations of the critically endangered Great Indian Bustard.
- It is the only GIB Sanctuary in Andhra Pradesh.
- It owes its genesis to the discovery of the endangered Great Indian Bustard (GIB).
- About 32 species of grasses like *Aristida funiculata*, *Chrysopogon fulvus*, *Heteropogon contortus*, like *Cassia fistula* (Golden shower tree), *Butea monosperma* (Flame of the forest), *Acacia* spp, *Ziziphus mauritiana*, etc.

3. Snow Leopard : Survey



- The first scientific survey of the snow leopard in India shows the country is home to 718 of the elusive cats, the government said recently.
- Snow Leopard is a large, long-haired Asian cat, classified as either *Panthera uncia* or *uncia* in the family *Felidae*.
- Snow leopards live across a vast area in northern and central Asia's high mountains, including the Himalayan region.
- In the Himalayas, they live in high alpine areas, mostly above the tree line and up to 18,000 feet in elevation.
- They are found in 12 countries, including China, Bhutan, Nepal, India, Pakistan, Russia, and Mongolia.
- In India, it is seen in Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.
- Measuring from nose to tail, the length of an average adult is 1000 to 1300 mm.

- They have thick grey and yellow-tinged fur, with solid spots on their head, neck, and lower limbs and rosettes over the rest of the body.
- They also have very long, thick tails that they use for balancing on rocks and wrapping around their bodies for protection from the cold.
- They are solitary, and the only prolonged social contact occurs while females are raising their cubs.
- Conservation status:
 - o IUCN Red List: Vulnerable
 - o CITES: Appendix I
 - o Wildlife (Protection) Act 1972: Schedule I

4. **Thanthai Periyar Wildlife Sanctuary**

- The Tamil Nadu government has declared



80,114.80 hectares of reserve forests in Bargur Hills in Erode district, as the Thanthai Periyar Wildlife Sanctuary.

- This region is part of the corridor that connects the Sathyamangalam Tiger Reserve (STR) to the Male Mahadeshwara Hills Tiger Reserve and the Cauvery Wildlife Sanctuary and plays a crucial role in maintaining a viable tiger population.
- These forests occupy a prominent position in the Eastern Ghats as they merge with the Western Ghat at the Nilgiris.
- The vast landscape is home to diverse flora and fauna, making it an ideal habitat for various life forms.
- The landscape is interconnected to the Kollegal forests of Karnataka and the Nilgiris, creating one of the most diverse habitats in the region.
- It is one of the tiger corridors identified by the National Tiger Conservation Authority.
- The region is also part of the Nilgiris Elephant Reserve and is home to a healthy population of large herbivores including elephants and the Indian Gaur.

- Also, the landscape is the catchment of the Palar River that drains into the Cauvery River and is a crucial water source for agricultural activities.
- It is also of cultural and historical significance to tribal and local communities who depend on these ecosystems for their livelihoods and traditional practices.

5. **Corbett Tiger Reserve: Five People Killed In Two Months**

- Five people have been killed near Uttarakhand's Corbett Tiger Reserve in the past two months.
- Corbett Tiger Reserve is located on the foothills of the Himalayas in Uttarakhand.
- By and large, the reserve is spread over the Bhabar and lower Shivalik regions with a deep-water table.
- Corbett was the first national park in India and



was established in 1936.

- It was named Hailey National Park then. In 1957, the park was rechristened Corbett National Park in memory of the late Jim Corbett, a great naturalist and eminent conservationist.
- The habitat is characterised by open meadows (chaurs) interspersed with sal and moist, mixed deciduous forests.
- The grasslands are locally known as 'Chaur', which are an outcome of abandoned settlements or past clearings.

6. **World's First Melanistic Tiger Safari: Odisha**

- Odisha is set to unveil the world's first melanistic tiger safari near the Similipal Tiger Reserve (STR).
- Melanism and Melanistic Tiger: Melanism is a genetic condition, that results in increased melanin production, leading to black or nearly black skin, feathers, or hair in animals.
- The Royal Bengal Tigers of Similipal boast a

distinctive lineage with elevated melanin levels, giving rise to black and yellow interspersed stripes, making them pseudo-melanistic.

- According to the All India Tiger Estimation, 2022, Simlipal Tiger Reserve houses 16 tigers, with 10 of them displaying melanistic traits.
- Spanning approximately 200 hectares near Dhanbad-Balasore National Highway-18, the safari site lies in close proximity to STR, providing a landscape akin to Simlipal.
- In the beginning, three melanistic tigers from Nandankanan Zoo, along with rescued or orphaned tigers, will occupy the open enclosures of the safari.
- It aims to raise awareness about the conservation needs of melanistic tigers, providing a platform for researchers and enthusiasts to engage with these rare big cats.
- The project necessitates approvals from the Central Zoo Authority and other regulatory bodies overseeing wildlife initiatives in the country.
- A National Tiger Conservation Authority committee will also conduct a feasibility study of the proposed site before granting final clearance.

7. World Wetlands Day 2024: 2nd February

- India celebrated World Wetlands Day 2024 at Sirpur Lake, a Ramsar site in Indore.



- The theme of World Wetlands Day 2024 was 'Wetlands and Human Wellbeing,' emphasizing the critical role wetlands play in flood protection, clean water, biodiversity, and recreational opportunities.
- India increased its tally of Ramsar sites to 80 by designating five more wetlands as Ramsar sites recently.

Wetlands are low-lying areas of land that are saturated with water, either permanently or seasonally.

They are transition zones between land and water, where the flow of water, the cycling of nutrients, and the energy of the sun meet.

8. Ramsar Sites: Increased

- The Ministry of Environment, Forest and Climate Change announced that on the eve of World



Wetlands Day, 2024, India has increased its tally of Ramsar sites to 80 from the existing 75 by designating five more wetlands as Ramsar sites.

- Three of these sites, Ankasamudra Bird Conservation Reserve, Aghanashini Estuary and Magadi Kere Conservation Reserve are located in Karnataka whereas two, Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest are in Tamilnadu.
- Tamil Nadu continues to have the maximum number of Ramsar Sites (16 sites) followed by Uttar Pradesh (10 sites).
- Ramsar Convention is an intergovernmental treaty, adopted on 2nd February 1971, in the Iranian city of Ramsar, on the southern shore of the Caspian Sea.
- In India, it came into force on 1st February 1982, under which wetlands of international importance are declared as Ramsar sites.
- Ankasamudra Bird Conservation Reserve (Karnataka):
 - It is a human-made village irrigation tank built centuries back and is spread over an area of 244.04 acres adjoining the Ankasamudra village.

- Aghanashini Estuary (Karnataka): It is spread over an area of 4801 ha, and is formed at the confluence of the Aghanashini River with the Arabian Sea.
- The brackish water of the estuary provides diverse ecosystem services including flood and erosion risk mitigation, biodiversity conservation and livelihood support.
- The wetland also provides livelihoods by supporting fishing, agriculture, collection of edible bivalves and crabs, shrimp aquaculture, traditional fish farming in the estuarine rice fields (locally known as Gazni rice fields) and salt production.
- Magadi Kere Conservation Reserve (Karnataka): It is a human-made wetland with an area of nearly 50 hectares which was constructed to store rainwater for irrigation purposes.
- The wetland harbors two vulnerable species, namely Common pochard (*Aythya ferina*) and River tern (*Sterna aurantia*) and four near-threatened species namely Oriental Darter (*Anhinga melanogaster*), Black-headed Ibis (*Threskiornis melanocephalus*), Woolly-necked Stork (*Ciconia episcopus*) and Painted Stork (*Mycteria leucocephala*).
- It is also one of the largest wintering grounds for the Bar-headed goose (*Anser indicus*) in Southern India. It has been declared globally as an Important Bird and Biodiversity Area (IBA).
- Karaivetti Bird Sanctuary (Tamil Nadu): Water from the wetland is utilized by the villagers for cultivating agricultural crops such as paddy, sugar cane, cotton, corn, and split red gram.
- About 198 species of birds have been recorded here; some of the important visitors being the Bar-headed Goose, Pin-tailed duck, Garganey, Northern Shoveler, Common Pochard, Eurasian Wigeon, Common teal and Cotton teal.
- Longwood Shola Reserve Forest (Tamil Nadu): It derives its name from the Tamil word, “Solai”, which means a ‘tropical rainforest’.
- The ‘Sholas’ are found in the upper reaches of the Nilgiris, Anamalais, Palni hills, Kalakadu, Mundanthurai and Kanyakumari in Tamil Nadu.
- These forested wetlands serve as habitats for the

globally endangered Black-chinned Nilgiri Laughing thrush (*Strophocincla cachinnans*), Nilgiri Blue Robin (*Myiomela major*), and vulnerable Nilgiri Wood-pigeon (*Columba elphinstonii*).

9. Anoxic Marine Basins

- According to scientists, anoxic marine basins may be among the most viable places to conduct large-scale carbon sequestration in the deep ocean.
- Anoxic Marine Basins is a body of water without oxygen.
- Permanent anoxic basins form when there is a strong layering of the water column created in a cup-like formation on the ocean floor.
- The layering is caused by density differences due to salt concentration or temperature.
- Once stratification occurs, circulation with the rest of the ocean is minimised, and microorganisms consume the oxygen in the water.
- In most anoxic basins, the water is extremely stagnant and can have mixing times of many thousand years.
- They can’t support animal life and are populated primarily by microbes and some very specialised fungi with different metabolisms than creatures in oxygen-rich environments.
- Some of them rely on molecules such as nitrate for respiration, and some get their carbon from gases like carbon dioxide (CO₂) and methane (CH₄) instead of eating other organisms or particles of organic matter.
- Many anoxic basins also contain toxic chemicals, which are produced by geothermal activity or by microbes living in the basins.
- Some also contain salt domes, big mounds of hardened salt.
- In some anoxic basins, methane and other gases collect in reservoirs beneath the seafloor.
- The gases can percolate upward, pushing up domes of sediment on the seafloor that are called mud volcanoes.
- The gases can burst through the soft sediments, creating “mini-eruptions” of wispy columns of sediment-filled water.

10. Gupteshwar Forest: Biodiversity Heritage Site

- Gupteshwar Forest, adjacent to Gupteshwar Shiva temple in Odisha's Koraput district has been declared as the 4th Biodiversity Heritage Site (BHS) of the state.
- Gupteshwar Forest covers 350 hectares of demarcated area and holds immense cultural significance with its sacred groves, traditionally revered by the local community.
- It harbours a remarkable diversity of flora and fauna.
- The forest is home to at least 608 faunal species, including 28 species of mammals.
- Notable faunal species documented in the forest include the mugger crocodile, kanger valley rock gecko, sacred Grove Bush Frog, and various avifaunas such as black baza, Jerdon's baza, Malabar trogon, common hill myna, white-bellied woodpecker, and banded bay cuckoo.
- The limestone caves within the forest are home to eight species of bats, two of which are under the near-threatened category.
- The forest also boasts a rich floral diversity.
- It includes threatened medicinal plants like the Indian trumpet tree and Indian snakeroot.
- Biodiversity Heritage sites (BHS) are well-defined areas that are unique, ecologically fragile ecosystems with a high diversity of wild and domesticated species, the presence of rare and threatened species, and keystone species.

11. First National Conference on the Promotion of Seaweed Cultivation

- The first National Conference on the Promotion of Seaweed Cultivation took place at Koteswar, Kutch in Gujarat.
- It was chaired by Union Minister of Fisheries, Animal Husbandry & Dairying, Shri Parshottam Rupala .
- Implementing seaweed cultivation on a pan-India basis, emphasizing the promotion of seaweed cultivation to diversify marine production and enhance fish farmer income.
- Seaweed is the name given to the many species of marine algae and plants.

- These species grow in water bodies such as rivers, seas and oceans. They generally grow in the shallow waters in the tidal zone. Some seaweeds are microscopic, such as the phytoplankton that live suspended in the water column.
- Seaweed is full of vitamins, minerals, & fibre. Many seaweeds contain anti-inflammatory & anti-microbial agents.
- Seaweed Farming is the practice of cultivating and harvesting seaweed.
- Seaweeds are abundant along the Tamil Nadu and Gujarat coasts and around Lakshadweep and Andaman & Nicobar Islands.

12. Species Threat Abatement and Restoration (STAR) Metric

- The International Union for Conservation of Nature (IUCN) has introduced the Species Threat Abatement and Restoration (STAR) metric to quantify actions aimed at halting biodiversity loss in oceans.
- The STAR metric uses data from the IUCN Red List to quantify extinction risks and threats faced by species.
- It assesses how specific actions in certain locations can contribute to international conservation targets, focusing on threat abatement and habitat restoration.
- STAR helps measure progress towards global biodiversity targets and supports decision-making by governments, businesses, and organizations in conservation efforts.
- It was first unveiled in 2021 for use in terrestrial areas and has now been extended for marine ecosystems as well.
- It emphasizes reducing unsustainable fishing, managing invasive species, and addressing climate change.
- This metric aligns with international agreements such as the Kunming-Montreal Global Biodiversity Framework and the Sustainable Development Goals.

13. Single Species Action Plan: CMS COP14

- The 14th Conference of the Parties to the Convention on the Conservation of Migratory

Species of Wild Animals (CMS COP14) adopted the Single Species Action Plan for the conservation of the Hawksbill Turtle.

- International Single Species Action Plan is the key instrument developed under the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA).
- It is for the purpose of implementing coordinated measures to restore migratory waterbird species to a favourable conservation status.
- International cooperation among the species' range states is essential for the implementation of these action plans.
- Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) is an intergovernmental treaty dedicated to the conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago.
- It is developed under the framework of the Convention on Migratory Species (CMS) and administered by the United Nations Environment Programme (UNEP).
- It brings together countries and the wider international conservation community in an effort to establish coordinated conservation and management of migratory waterbirds throughout their entire migratory range.
- It covers 255 species of migratory waterbirds that are ecologically dependent on wetlands for at least part of their annual cycle.
- The Agreement area stretches from the northern reaches of Canada and the Russian Federation to the southernmost tip of Africa, covering 119 Range States from Africa, Europe, the Middle East and parts of Asia and Canada

14. Humboldt's Enigma

- Humboldt's enigma has garnered increased attention in the field of ecology as researchers seek to understand the unexpected biodiversity found in mountain ecosystems, challenging traditional beliefs.
- Sparked by Alexander von Humboldt's observations, it questions the conventional notion that tropical regions, fueled by ample sunlight,

are the primary centres of biodiversity on Earth.

It contends that despite receiving less sunlight and enduring colder temperatures, mountain ecosystems defy this notion by showcasing exceptional biodiversity, thereby challenging traditional ecological theories and prompting investigation into this anomaly.

Humboldt suggested there was a relationship between temperature, altitude, and humidity on one hand and the occurrence patterns of species or their biodiversity on the other.

His example of choice was the Chimborazo Mountain in Ecuador, which has today become an important illustration of mountain diversity.

15. Brumation : Reptilian Survival Strategy

- Researchers have observed instances of brumation in various reptilian species across habitats.
- Brumation is the name to describe a period of dormancy or slowed activity in reptiles, much



like hibernation in mammals.

- It typically occurs during colder months, when temperatures drop and food becomes scarce.
- During brumation, reptiles may retreat to underground burrows, rock crevices or other sheltered areas where temperatures are relatively more stable.
- Their metabolism slows significantly, allowing them to go weeks or even months without eating.
- This period of reduced activity allows reptiles to conserve energy and minimise their resource requirements.
- Such species include box turtles and painted turtles, which burrow into the mud at the bottom of ponds or lakes.

- Snakes may seek refuge in underground dens or caves while lizards may hide under rocks or within vegetation.

16. Melghat Tiger Reserve: Message to Save Tigers

- The ongoing Kula Mama Volleyball Tournament-2024 in Melghat Tiger Reserve's (MTR) Semadoh sends a strong message to save tigers and the pristine forest with the involvement of local youths.
- Melghat Tiger Reserve (MTR) is located in the Amaravati district of Maharashtra.
- It is located on the southern offshoot of the Satpura Hill Range in Central India, called Gawilgarh Hill.

- It was established as a wildlife sanctuary in 1967 and was declared a tiger reserve in 1974.

- It was the first tiger reserve in Maharashtra.

- Some of the common species are teak, Lagerstroemia Parviflora, Terminalia Tomentosa, Ougeinia Oojeinensis, Emblica Officinalis, Bamboo, etc.

- Apart from Tigers the other prominent animals are Sloth Bear, Indian Gaur, Sambar deer, Leopard, Nilgais, dhole, hyena, jungle cat, langur, etc.

- It is considered a stronghold of the critically endangered forest owl

INTERNATIONAL RELATIONS

1. Renewables 2023 Report: IEA

- The International Energy Agency (IEA)'s recent Renewables 2023 report paints a complex picture of the renewable energy sector, highlighting both progress and challenges.
- Major Highlights of the Renewables 2023 Report:
 - Global annual renewable capacity additions surged by nearly 50% to almost 510 gigawatts (GW) in 2023, marking the fastest growth rate in two decades.
 - China played a pivotal role, commissioning as much solar photovoltaics (PV) in 2023 as the entire world did in 2022, while wind additions grew by 66% year-on-year.
 - Renewables are projected to surpass coal as the largest source of electricity generation by 2025, with wind and solar PV becoming dominant sources by 2028.
 - US, EU, India, and Brazil: Supportive policies and improving economic attractiveness are driving accelerated growth in solar PV and onshore wind installations in these regions.
 - Middle East and North Africa: Policy incentives are spurring renewable capacity growth.
 - While sub-Saharan Africa is lagging despite its resource potential.
 - India is forecast to add 205 GW over 2023-2028, doubling 2022's cumulative installed capacity, making it the world's third-largest market for renewables.
 - Solar PV module prices dropped by nearly 50% in 2023 due to increased manufacturing capacity.
 - Solar PV and onshore wind are cheaper than both new and existing fossil fuel plants, driving their rapid adoption globally.
 - Emerging economies, led by Brazil, are driving biofuel expansion.
 - Biofuels and renewable electricity in EVs are forecasted to offset significant oil demand by 2028, emphasizing their complementary role.

2. World Government Summit (WGS) 2024

- The Indian Prime Minister will attend the World Government Summit 2024 as a guest of honour in the UAE.
- World Government Summit (WGS) is an annual global gathering that brings together world leaders, policymakers, experts, and thought leaders from various fields to discuss and address pressing global issues.
- Theme: "Shaping Future Governments"
- It was established in 2013 under the leadership of the Vice President and Prime Minister of the UAE.
- It is annually held in Dubai, UAE.
- The Summit, in its various activities, explores the agenda of the next generation of governments, focusing on harnessing innovation and technology to solve universal challenges facing humanity.
- Since its inception, the Summit has championed the mission of shaping future governments and creating a better future for humanity.

3. Munich Security Conference



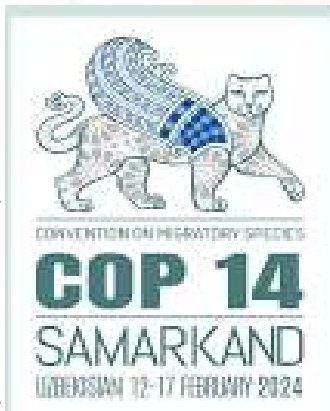
- World leaders gather for the sixtieth Munich Security Conference with growing concerns about a continued war in Ukraine and threats to North Atlantic Treaty Organization (NATO) cohesion.
- Munich Security Conference (MSC) is the world's leading forum for debating international security policy.
- Objective is to build trust and contribute to the peaceful resolution of conflicts by sustaining a continuous, curated, and informal dialogue

within the international security community.

- It has been held in Munich, Bavaria, Germany, since 1963.
- The conference is held annually in February.
- It brings together security experts, politicians, military leaders, and the defence industry from around the world.
- MSC regularly convenes high-profile events on particular topics and regions and publishes the Munich Security Report, an annual digest of relevant figures, maps, and research on crucial security challenges.

4. COP14: Hosted By the Government of Uzbekistan

- The Fourteenth Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (COP14) will be hosted by the Government of Uzbekistan, in Samarkand from 12-17 February 2024.
- It is also known as the Bonn Convention, is an environmental treaty under the aegis of the United Nations Environment Programme.
- It provides a global platform for the conservation and sustainable use of migratory animals and their habitats.
- It was signed in Bonn, Germany, on 23 June 1979.
- It is the only global and UN-based intergovernmental organisation established exclusively for the conservation and management of terrestrial, aquatic and avian migratory species throughout their range.
- The Conference of Parties (COP) is the decision-making organ of this convention.
- It has two Appendices.
 - o Appendix I list endangered migratory species and includes prohibitions regarding the take of these species.



- o Appendix II lists species that have an 'unfavourable conservation status' (as per the conditions set out in the Convention) and encourages range states to draft range-wide agreements for the conservation and management of these species.

5. Nagoya Protocol

- Cameroon recently adopted the Nagoya Protocol on Access and Benefit Sharing
 - The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (the Protocol) is a legally binding global agreement that implements the access and benefit-sharing obligations of the Convention on Biological Diversity (CBD).
 - It was adopted by the CBD in Nagoya, Japan, in October 2010 and entered into force on October 12, 2014, 90 days after the deposit of the fiftieth instrument of ratification.
 - It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilisation of genetic resources.
 - It establishes a framework that helps researcher's access genetic resources for biotechnology research, development, and other activities, in return for a fair share of any benefits from their use.
 - This provides the research and development sector with the certainty they need to invest in biodiversity-based research.
 - Indigenous and local communities may receive benefits through a legal framework that respects the value of traditional knowledge associated with genetic resources.
- #### 6. Nepal's Terai Arc Landscape (TAL) Initiative
- Nepal's Terai Arc Landscape (TAL) initiative earns UN recognition for ecosystem restoration, boosting hopes despite challenges like infrastructure expansion and human-wildlife conflict.
 - Terai Arc Landscape (TAL) is a transboundary biodiversity hotspot launched in 2001.

- It aims to conserve critical habitats for tigers, rhinos, elephants, etc., covering ecosystems of the Terai and Churia hills.
- Spanning over 900 km from the Bagmati River (Nepal) to the Yamuna River (India), it extends across 5 million hectares and supports over seven million people.
- The Terai Arc Landscape (TAL) initiative is a pioneering landscape-level ecosystem restoration project in Nepal aimed at creating dispersal space for tigers and reversing ecosystem degradation.
- It was launched in 2004 and has restored 66,800 hectares of forest, significantly boosting the Bengal tiger population in the region.
- The initiative connects different ecologically critical protected areas in Nepal and India, fostering transboundary conservation efforts.

7. ASEAN-India Trade In Goods Agreement

- The 3rd meeting of AITIGA Joint Committee for undertaking the review of ASEAN-India Trade in Goods Agreement (AITIGA) was hosted by India in Vanijya Bhawan, New Delhi from 16-19 February 2024.
- ASEAN-India Trade in Goods Agreement is a trade deal between the ten member states of ASEAN and India.
- This agreement was signed at the 7th ASEAN Economic Ministers-India Consultations in Bangkok, Thailand in 2009.
- The agreement, which came into effect in 2010, is sometimes referred to as the ASEAN-India Free Trade Agreement.
- The Agreement covers trade in physical goods and products; it does not apply to trade in services.
- ASEAN and India signed a separate ASEAN-India Trade in Services Agreement in 2014.
- ASEAN:
- It is a group of the Association of Southeast Asian Nations, which was established in 1967 with the signing of the Bangkok declaration.
- Founding members: Indonesia, Malaysia, Philippines, Singapore and Thailand.
- Presently ASEAN comprises 10 member states

namely Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia and Vietnam.

8. Mission Aspides

- The European Union recently launched Mission Aspides to protect commercial vessels in the Red Sea from attacks by Iran-backed Houthi rebels.
 - Mission Aspides is a European Union (EU) naval mission to protect cargo ships in the Red Sea from attacks from Yemen's Houthi rebels.
 - It will send European warships and airborne early warning systems to the Red Sea, Gulf of Aden and surrounding waters.
 - So far, France, Germany, Italy and Belgium have said they plan to contribute ships.
 - Aspides vessels, whose operational command centre will be in the Greek city of Larissa, will have orders to fire on the Houthis only if they attack first and will not be authorised to shoot pre-emptively.
 - The mission is planned for one year but may be renewed.
 - Red Sea is a semi-enclosed inlet(or extension) of the Indian Ocean between the continents of Africa and Asia.
 - It is one of the world's warmest seas.
 - It is connected to the Arabian Sea and the Indian Ocean to the south through the Gulf of Aden and the narrow strait of Bab El-Mandeb.
 - The northern portion of the Red Sea is bifurcated by the Sinai Peninsula into the Gulf of Aqaba and the Gulf of Suez, where it is connected to the Mediterranean Sea via the famous Suez Canal.
- ## 9. 'INDUS-X' Summit
- The defence ministry said the 'INDUS-X' summit in Delhi marks a "significant milestone" in the collaborative efforts between the two countries.
 - U.S.-India Defense Accelerator Ecosystem (INDUS-X) was launched in June 2023 during the state visit of the Prime Minister of India to the US.
 - Objective is to expand strategic technology partnerships and defence industrial cooperation



between governments, businesses, and academic institutions in India and the US.

- INDUS X will be a defence innovation bridge, which will inter-alia, include Joint Challenges, Joint Innovation Fund, Academia engagement, Industry-startup connect, investment by private entities in defence projects, mentoring by experts and niche technology projects etc.
- It will focus on advancing high-tech cooperation and fostering joint research, development, and production opportunities in the defence sector.
- The initiative aims to explore possibilities for co-producing jet engines, long-range artillery, and infantry vehicles.
- India's Innovations for Defense Excellence (iDEX) and the Office of the Secretary of Defense (OSD), US, are leading INDUS-X activities.
- Innovations for Defense Excellence (iDEX) are the flagship scheme of the Ministry of Defence, Govt of India, launched in 2018.

- The objective of the scheme is to cultivate an innovation ecosystem in the Defence and Aerospace sector by collaborating with startups, innovators, MSMEs, incubators, and academia.

10. Corruption Perception Index (CPI) 2023

- India's rank in the Corruption Perception Index (CPI) 2023 has slipped to 93 out of 180 countries, with a score of 39.
- Corruption Perception Index (CPI) is an annual index released by Transparency International, a global civil society organisation.
- The CPI ranks 180 countries and territories by their perceived levels of public sector corruption on a scale of zero (highly corrupt) to 100 (very clean).
- CPI-2023 results show that most countries have made little to no progress in tackling public sector corruption.
- CPI global average score remains unchanged at 43 for the twelfth year in a row.
- Denmark topped the index for the sixth consecutive year.
- Somalia was ranked last, other countries occupying the bottom spots included: Venezuela, Syria, South Sudan and Yemen.
- India has tied with Maldives, Kazakhstan, and Lesotho to rank at 93 out of 180 countries. In 2022, India was ranked at 85.
- Pakistan scored 29 with a rank of 133 and China, scored 42 occupying rank 76.

SCIENCE AND TECH

1. Transiting Exoplanet Survey

Satellite : NASA

- Using data from NASA's Transiting Exoplanet Survey Satellite (TESS), astronomers have recently discovered and characterised a habitable zone planet named TOI-715b.
- Transiting Exoplanet Survey Satellite (TESS) is a NASA mission that's searching for planets orbiting the brightest stars in Earth's sky.
- The satellite is a follow-up to NASA's highly successful Kepler space telescope, which found thousands of exoplanets during a decade of work after its launch in 2009.
- It was launched on April 18, 2018, aboard a SpaceX Falcon 9 rocket out of Cape Canaveral.
- TESS circles Earth in a unique high Earth orbit of 12 to 15 days, which is inclined in such a way that the telescope's sky view is largely free from obstructions by our bright planet and the Moon.
- Over the course of its two-year primary mission, TESS' four sensitive cameras systematically scanned over 200,000 of the nearest and brightest stars, imaging 75% of the sky. It found 2,100 planetary candidates and 66 confirmed exoplanets.
- The prime mission ended on July 4, 2020, and TESS is now on an extended mission.
- TESS is finding planets ranging from small, rocky worlds to giant planets, showcasing the diversity of planets in the galaxy.

2. ABHYAS : Flight Trials



- The Defence Research and Development Organisation (DRDO) successfully conducted four flight trials of the high-speed expendable aerial target 'ABHYAS' recently.
- ABHYAS is a high-speed expendable aerial

target (HEAT).

- It is designed by the DRDO's Aeronautical Development Establishment (ADE).
- ABHYAS offers a realistic threat scenario for the practice of weapon systems.
- It is the ideal platform for the validation of Armed Forces equipment slated for induction, only those that require aerial engagement.
- It is designed for autonomous flying with the help of an autopilot indigenously made by the ADE.
- It has a radar cross-section and a visual and infrared augmentation system required for weapon practice.
- The target drone has a laptop-based Ground Control System with which the aircraft can be integrated and pre-flight checks, data recording during the flight, replays after the flight and post-flight analysis can be carried out.

3. India's First Hypervelocity Expansion Tunnel Test Facility:



- The Indian Institute of Technology Kanpur (IIT-K) has successfully established and tested India's first Hypervelocity Expansion Tunnel Test Facility recently.
- The S2, nicknamed 'Jigarthanda', is a 24-metre-long facility located at IIT Kanpur's Hypersonic Experimental Aerodynamics Laboratory (HEAL) within the Department of Aerospace Engineering.
- It is India's first Hypervelocity Expansion Tunnel Test Facility.
- It was indigenously designed and developed over three years with funding and support from the Aeronautical Research and Development Board (ARDB), the Department of Science and Technology (DST), and IIT Kanpur.

- It is capable of generating flight speeds between 3-10 km/s, simulating the hypersonic conditions encountered during the atmospheric entry of vehicles, asteroid entry, scramjet flights, and ballistic missiles.
- It will be a critical asset for the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO).
- It will serve as a testing ground for ongoing missions of ISRO and DRDO like Gaganyaan, Reusable Launch Vehicles (RLV), and hypersonic cruise missiles, enabling the development of more advanced and reliable aerospace technologies

4. Digital Detox Initiative

- The Karnataka government recently announced a new 'Digital Detox' initiative in collaboration with the All India Game Developers Forum (AIGDF).
- The programme aims to spread awareness about the negative impacts of excessive technology use and encourage more mindful digital habits.
- The goal of the 'Digital Detox' initiative is to reduce the amount of time people spend immersed in digital devices and social media. Speaking at the GAFX 2024 event, Minister for IT&BT Priyank Kharge said the programme intends to address issues like mental health problems, shortening attention spans, and weakening in-person relationships that can stem from digital dependence.
- The Karnataka government will work together with AIGDF, which represents India's gaming industry, on the 'Digital Detox' program.
- This collaboration reflects how technology itself can potentially provide solutions for problems arising from technology overuse.
- The gaming industry has a key role to play in encouraging responsible use of digital entertainment.

5. InTranSE Program

- During the launch event of "Digital India FutureLABS Summit 2024" held at IIIT-Delhi, three Indigenous Technologies – Thermal

camera, CMOS camera and Fleet Management System designed and developed by CDAC Thiruvananthapuram under InTranSE Program of MeitY were transferred to 12 Industries.

- The Intelligent Transportation System Endeavor (InTranSE) is a revolutionary collaborative research and development programme.
- It is an initiative of the Ministry of Electronics & IT.
- Purpose is to synergize the transformation in Intelligent Transportation Systems the Ministry of Electronics & IT took early steps by bringing together premier academic institutes like the Indian Institute of Technology (IIT), the Indian Institute of Science (IISc), Indian Institute of Management (IIM) etc. and Premier R&D Centre like C-DAC under one umbrella.
- This initiative formulated the Collaborative Intelligent Transportation Systems Endeavor for Indian Cities (InTranSE) during the year 2009-2012 (Phase-I) that witnessed IIT Bombay, IIT Madras, IIM Calcutta and C-DAC Thiruvananthapuram collaboratively developing, implementing, demonstrating and knowledge transfer of ITS products and solutions.
- The InTranSE Phase-II program (2019-2021) is aiming at undertaking R&D projects collaboratively with IIT Bombay, IIT Madras, IISc Bangalore and C-DAC Thiruvananthapuram
- It will achieve traffic efficiency by minimising traffic problems, prompting efficient infrastructure usage, enriching users with prior information about traffic and reducing travel time as well as enhancing the safety and comfort of commuters.

6. PM Modi announces 4 astronauts for Gaganyaan



- Group Captain Prasanth Balakrishnan Nair, Group Captain Ajit Krishnan, Group Captain Angad Pratap, and Wing Commander

Shubhanshu Shukla are selected as astronauts for India's Gaganyaan mission, all being experienced Indian Air Force test pilots.

- Technology Readiness: ISRO successfully tested the human readiness of the cryogenic engine (CE20) for Gaganyaan. The LVM3 rocket, equipped with liquid, solid, and cryogenic stages, has been reconfigured for human spaceflight, with all components meeting required standards.
- Launch Vehicle: ISRO's LVM3 rocket, known for its reliability with seven successful flights, will be used for all Gaganyaan missions. The rocket consists of liquid and solid stages, with the cryogenic engine passing final tests on February 14, certifying it for human space missions.
- Crew Module and Escape System: Preparations include developing life support systems, emergency escape provisions, and crew management aspects. Gaganyaan-1, an unmanned test flight, will demonstrate technology readiness and carry an unpressurized crew module for testing.
- Mission Timeline: Gaganyaan-1, the unmanned test flight, is scheduled for the end of 2024 to assess technology readiness. The subsequent manned mission will involve a three-member crew orbiting at 400 km altitude for three days, making history as India's first crewed space mission.
- This year, 121 aircraft, including Tejas, Prachand, Dhruv, Rafale, Mirage-2000, Sukhoi-30 MKI, Jaguar, Hawk, C-130J, Chinook, Apache, and Mi-17, will participate in the exercise, showcasing the capabilities of indigenous Surface to Air Weapon systems Akash and Samar in tracking and shooting down intruding aircraft.

7. Vaccine Safety Net

- The Healthy Indian Project (THIP), a health information platform in India, is included as a member of the World Health Organization's Vaccine Safety Net (VSN).
- Vaccine Safety Net is a global network of websites, established by the World Health Organization that provides reliable information on vaccine safety.

It is a network of a diverse group of digital information resources (websites and social media), VSN members, located in countries around the world and providing scientifically based information on vaccine safety in various languages.

- A key player in the Project is the Global Advisory Committee on Vaccine Safety (GACVS), established by WHO in 1999, to respond promptly, efficiently, and with scientific rigour to vaccine safety issues of potential global importance.
- At the outset of the Project, GACVS developed three categories of criteria for good information practices – regarding credibility, content, accessibility and design to which digital resources providing information on vaccine safety should adhere.
- WHO evaluates those electronic resources for their adherence to these criteria.
- It is continuously expanding and to date, 110 websites from 45 countries provide vaccine safety information in 43 languages.

8. Exercise Vayu Shakti-24

- The Indian Air Force will be conducting Exercise Vayu Shakti-24 on 17th February 2024 at the Pokhran Air to Ground Range, near Jaisalmer.
- Exercise Vayu Shakti is set to deliver a compelling display of the Indian Air Force's offensive and defensive prowess, seamlessly operating both day and night.
- Additionally, the exercise will highlight collaborative manoeuvres with the Indian Army, showcasing their joint operational capabilities.
- The exercise will showcase IAF's prowess in precision, long-range weapon delivery, and effective operations from various air bases, including special missions with transport, helicopter fleets, Garuds, and Indian Army elements.

9. DC-8 Flying Laboratory of NASA

- NASA has begun conducting marathon research flights across Asia in order to improve air pollution forecasting models.
- The flights aim to collect detailed data on air

pollution sources and behavior to enhance warning systems for the public. Millions of deaths each year are linked to air pollution.

- The flights involve NASA's DC-8 flying laboratory, the world's largest aircraft designed for airborne science missions.
- The DC-8 is flying for up to 8 hours at a time, sometimes as low as 15 meters above the ground, to collect air pollution particles for analysis.
- The research flights can "provide direct measurements of how much pollution is coming from different sources."
- This data is critical for the air quality forecasting models that inform pollution warnings and policies.
- The DC-8 can help fill gaps and improve satellite data interpretation.
- By combining data from air, ground, and space, the project can lead to more accurate forecasting models.

10. Typbar Typhoid Vaccine

- Phase-3 trial conducted in Malawi, Africa, a region endemic for typhoid fever, has demonstrated the long-term efficacy of Bharat Biotech's Typhoid conjugate vaccine (TCV), Typbar.
- Typbar TCV is the world's first clinically proven conjugate Typhoid vaccine.
- Typhoid fever is a life-threatening infection caused by the bacterium Salmonella Typhi.
- It is usually spread through contaminated food or water.
- It is transmitted by the faecal-oral route, through ingestion of contaminated food or water.
- Once the bacteria are ingested, it multiplies and spreads into the bloodstream.
- Urbanisation and climate change have the potential to increase the global burden of typhoid
- It encompasses fever, fatigue, gastrointestinal problems, headache, and occasionally a rash.
- Severe cases can result in complications or death, confirmed through blood testing.
- Risk Factor and Disease Burden: In 2019, there were an estimated 9.24 million typhoid cases and 1,10,000 deaths across the world.

It remains a significant health issue, particularly in developing regions.

- The majority of the typhoid cases and deaths in 2019 occurred in South-East Asia and Africa.
- Antibiotics are the mainstay of treatment, but increasing resistance to antibiotic treatment is making it easier for typhoid to spread in communities that lack access to safe drinking water or adequate sanitation.

11. Zircon Missile

- In an attempt to hit a target in Kyiv, Russian



forces launched a 3M22 Zircon missile recently.

- The 3M22 Zircon, or SS-N-33, is a scramjet-powered manoeuvring anti-ship hypersonic cruise missile developed in Russia.
- The missile is reportedly capable of flying with speeds up to Mach 9 and a range of 1000 km.
- It is a two-stage missile that uses solid fuel in the first stage and a scramjet motor in the second stage.
- Zircon cruise missiles use cooled supersonic combustion ramjet engines, which power combustion by compressing air flowing at supersonic speeds due to the missile's forward motion.
- Valuable aspect of the missile is its plasma cloud.
- During flight, the missile is completely covered by a plasma cloud that absorbs any rays of radio frequencies and makes the missile invisible to radars.

12. Kyasanur Forest Disease: Viral Infection

- Two people have died due to Kyasanur Forest Disease (KFD), a viral infection, in Karnataka.
- According to the health department, the first fatality due to monkey fever was reported in

Shivamogga district on 8 January wherein an 18-year-old succumbed to the virus.

- The second fatality was reported at Manipal in Udupi district when a 79-year-old man died in a private hospital.
- Kyasanur Forest Disease (KFD) also known as monkey fever, is a tick-borne viral haemorrhagic fever endemic to the southwestern part of India.
- KFD is caused by the Kyasanur Forest disease virus (KFDV), a member of the Flaviviridae virus family.
- Hard ticks (*Haemaphysalis spinigera*) serve as the reservoir for KFDV. Once infected, ticks remain carriers for life.
- Rodents, shrews, and monkeys become common hosts for KFDV after being bitten by an infected tick.
- Humans can contract KFD through tick bites or contact with infected animals.
- According to the US Centers for Disease Control and Prevention (CDC), the disease was first identified in 1957 when it was isolated from a sick monkey from the Kyasanur Forest in Karnataka
- There is no specific treatment for KFD, but early hospitalization and supportive therapy is important.
- A vaccine exists for KFD and is used in endemic areas of India

13. Lab-Grown Fish

- ICAR-Central Marine Fisheries Research Institute (CMFRI) has entered into a collaborative research agreement with a private-sector start-up offering cultivated meat technology solutions to grow fish meat in the laboratory.
- Lab-grown fish is merely a type of lab-grown or cultivated/cultured meat.
- Seafood without the sea is 'grown' in the same way as other cultivated meats are grown without the need to raise and kill an animal.
- Cultivated fish meat is produced by isolating specific cells from fish and growing them in a laboratory setting using media that is free of animal components.
- The final product is expected to replicate the

flavour, texture, and nutritional qualities of 'real' fish meat.

- It will focus on the genetic, biochemical, and analytical work related to the project.
- In its cell culture lab, it will carry out research on early cell line development of high-value marine fish species — a process that involves isolating and cultivating fish cells for further research and development.
- It will initially focus on developing cell-based meat of fish such as pomfret, kingfish, and seerfish.
- A number of countries have made great strides in this pioneering technology.

14. Rare Human Case of Bubonic Plague: US

- Officials in the US state of Oregon recently said they are dealing with a rare human case of bubonic plague that was likely transmitted by a pet cat.
- Plague is an infectious disease caused by a specific type of bacterium called *Yersinia pestis*, a zoonotic bacterium usually found in small mammals and their fleas.
- Pestis can affect humans and animals and is spread mainly by fleas.
- Bubonic plague is one type of plague.
- It gets its name from the swollen lymph nodes (buboes) caused by the disease.
- Called the Black Death, it killed millions of Europeans during the middle Ages.
- The other types of plague are:
 - o Septicemic plague, which happens when the infection goes all through the body.
 - o Pneumonic plague, which happens when the lungs are infected.
- Plague can be a very severe disease in people, with a case-fatality ratio of 30% to 60% for the bubonic type, and is always fatal for the pneumonic kind when left untreated.
- Symptoms: Bubonic plague symptoms includes sudden high fever and chills.

15. Sada Tanseeq : Maiden Joint Military Exercise

- The maiden joint military exercise ‘Sada Tanseeq’ between the Indian Army and the Royal Saudi Land Force concluded at Mahajan Field Firing Ranges.
- It was a 12-day joint exercise that aimed to achieve interoperability between the two forces and acquaint each other with operational procedures and combat drills under United Nations (UN) mandate.
- Both the contingents jointly took part in the validation phase which included creation of Temporary Operating Base, establishing an intelligence, surveillance and reconnaissance grid and establishing mobile vehicle check post

16. Ultracold Atoms

- This technique eliminates 50% of unwanted interference fringes in images, crucial for understanding the quantum mechanics properties of cold atoms.
- Traditional imaging techniques suffer from interference fringes, reducing result quality and accuracy in parameters like atom number and temperature.
- The new algorithm, detailed in a recent paper in Applied Optics, significantly reduces interference fringes and improves temperature uncertainty in cold Rubidium atoms by 50%.
- This technique holds promise for the widespread application of absorption imaging in the study of ultracold atoms
- An ultracold atom is an atom with a temperature close to absolute zero.
- At these temperatures, an atom’s quantum-mechanical properties become important.
- Ultracold gases are ensembles of atoms held at a temperature close to absolute zero.
- Such systems enable the creation of exotic phenomena such as Bose–Einstein condensation.

17. High Altitude Pseudo-Satellite (HAPS)

- The Council of Scientific and Industrial Research (CSIR) – National Aerospace Laboratories (NAL) recently conducted successful tests on a

High Altitude Pseudo-Satellite (HAPS), marking a significant milestone in unmanned aerial vehicle (UAV) technology.

- High Altitude Pseudo-Satellite (HAPS) is a solar-powered UAV. It can generate solar energy and remain in the air for months or years.
- HAPS operates in the stratosphere (which extends from 6-50 km above the earth’s surface), flying at altitudes of 18-20 km, nearly double the heights of commercial aeroplanes.
- This altitude allows them to provide surveillance capabilities akin to satellites.
- HAPS is designed for persistent surveillance, communications, and specialist science missions.
- HAPS is a still-developing technology, and the successful test flight puts India among a very small group of countries currently experimenting with this technology.
- HAPS can be deployed in disaster situations and provide mobile communication networks (5G waves) in remote areas, if the normal networks get damaged due to any calamity.
- They can double up as “towers in the sky” and have more flexibility than satellites, in being able to map a piece of land from above.

18. eROSITA : Data

- The German eROSITA consortium has released the data for its share of the first all-sky survey by the soft X-ray imaging telescope.
- The eROSITA (extended ROentgen Survey with an Imaging Telescope Array) is a wide-field X-ray telescope on board the Russian-German “Spectrum-Roentgen-Gamma” (SRG) observatory.
- It was developed under the leadership of the Max-Planck Institute for Extraterrestrial Physics in Germany (DE).
- It is a sensitive X-ray telescope capable of delivering deep, sharp images over very large areas of the sky.
- The eROSITA telescope consists of seven identical Wolter-1 mirror modules.
- SRG was successfully launched from Baikonur on July 13 2019, and placed in a halo orbit around the L2 point.

- It has been performing an all-sky survey, in which the whole celestial sphere is mapped once every six months. Eight such all-sky charts are planned until December 2023.
- It is also expected to yield a sample of several million Active Galactic Nuclei, providing a unique view of the evolution of supermassive black holes within the emerging cosmic structure.
- The survey will also provide new insights into a wide range of astrophysical phenomena, including accreting binaries, active stars and diffuse emission within the Galaxy, as well as solar system bodies that emit X-rays via the charge exchange process.

19. Volt Typhoon

- The United States government recently shut down a major China-backed hacking group dubbed “Volt Typhoon” that attacked hundreds of routers and had been working to compromise U.S. cyber infrastructure.
- Volt Typhoon is a state-sponsored hacking group based in China that has been active since at least 2021.
- The group typically focuses on espionage and information gathering.
- It has targeted critical infrastructure organisations in the US, including Guam.
- To achieve their objective, the threat actor puts a strong emphasis on stealth, relying almost exclusively on living-off-the-land techniques and hands-on-keyboard activity.
- The recurring attack pattern of the Volt Typhoon begins with initial access via exploitation of public-facing devices or services.
- Volt Typhoon employs the comparatively uncommon practice of leveraging preinstalled utilities for most of their victim interactions.
- Compromised small office/home office (SOHO) devices are used by the attackers to proxy communications to and from the affected networks.
- They issue commands via the command line to (1) collect data, including credentials from local and network systems: (2) put the data into an archive file to stage it for exfiltration: and then (3) use the stolen valid credentials to maintain persistence.

- Volt Typhoon was a particularly quiet operator that hid its traffic by routing it through hacked network equipment, like home routers, and carefully expunging evidence of intrusions from the victim’s logs.

20. Sangam: Digital Twin Initiative

- The Department of Telecommunications (DoT) has unveiled the ‘Sangam: Digital Twin’ initiative.
- Sangam: Digital Twin Initiative is a Proof of Concept (PoC) distributed in two stages to be conducted in one of the major cities of India.
- The first stage is exploratory for clarity of horizon and creative exploration to unleash potential.
- The second stage is for practical demonstration of specific use cases generating a future blueprint that may serve as a roadmap to scale and replicate successful strategies in future infrastructure projects through collaboration.
- The initiative aims to demonstrate practical implementation of innovative infrastructure planning solutions, to develop a model framework for facilitating faster and more effective collaboration and to provide a future blueprint that may serve as a roadmap to scale and replicate successful strategies in future infrastructure projects.
- Digital Twin technology offers a solution by creating virtual replicas of physical assets, allowing for real-time monitoring, simulation and analysis for experimental iterations and feedback loops to adapt to the changes to achieve the best outcomes.
- The initiative comes against the backdrop of the past decade’s breakthroughs in communication, computation and sensing in the era of tech striving for the vision 2047.
- Digital Twin symbolises a collaborative leap towards reshaping infrastructure planning and design, combining the prowess of 5G, IoT, AI, AR/VR, AI native 6G, Digital Twin and next-gen computational technologies with the collective intelligence of public entities, infrastructure planners, tech giants, startups, and academia to break the silos and engage in a whole-of-nation approach..

21. 31 MQ-9B Sky Guardian

- The US State Department has approved a possible foreign military sale of 31 MQ-9B Sky Guardian to India.
- The MQ-9B Predator drone is an unmanned aerial vehicle. MQ-9B SeaGuardian is a maritime-focused version of the SkyGuardian remotely piloted aircraft system (RPAS).
- The MQ-9B drones are also known as “Predators”. They are High Altitude Long Endurance (HALE) drones that can fly for over 40 hours using a satellite.
- Out of the 31 MQ-9B Predator drones, of which the Navy will get 15 SeaGuardian drones, while the Army and the Indian Air Force will get eight each of the land version – SkyGuardian.
- They can be used for offensive missions, reconnaissance, surveillance, and intelligence operations.

22. Cygnus X-1

- Astro Sat, India’s first, dedicated multi-wavelength astronomy mission, accomplished the difficult task of measuring the X-ray polarisation of the Cygnus X-1 black hole system
- Cygnus X-1 was discovered over four decades ago.
- It is one of the first confirmed black hole systems in our galaxy.
- The black hole in Cygnus X-1 is 20 times heavier than the Sun, and has a companion a heavy supergiant star (40 times more massive than the Sun) in a binary system.
- It is located at a distance that is about 400 times more than the distance between Earth and Sun.
- Due to the gravitational pull of the black hole, material from the supergiant falls and spirals in towards the black hole.
- This process leads to the formation of a thin accretion disk which is responsible for soft X-rays.

23. Anti-Satellite Weapon

- Russia is actively working towards a formidable new development in space technology, focusing on creating a nuclear anti-satellite (ASAT) weapon.

- Anti-Satellite Weapon is designed to debilitate or destroy satellites that are already in orbit and operational.
- Types of Anti-Satellite Weapons: ASATs are



broadly classified into two types namely

- o Kinetic energy methods: This involves launching a missile that intercepts and physically collides with the target satellite to destroy it. The kinetic energy ASATs physically collide with satellites and can reach altitudes. These ASATs can be ballistic missiles, drones, and other satellites.
 - o Non-kinetic methods: They use non-physical attacks such as cyber-attacks, jamming, and even lasers to blind satellites without physically destroying them.
- All of these attacks can be launched from the air, low orbit, or even ground installations.
 - These can even undertake pellet cloud attacks on the enemy’s low-orbit satellites.
 - Other ASAT capabilities include cyber-attacks on space systems, Electro-Magnetic Pulse (EMP) explosion devices, directed energy (laser-based) weapons and targeted missiles for the destruction of satellites to sabotage the enemy’s military operations.
 - There are many countries which have this capability, but only four countries including India have demonstrated their ASAT capabilities.

24. GRAPES-3 Experiment

- The GRAPES-3 experiment discovered a new feature in the cosmic-ray proton spectrum at about 166 tera-electron-volt (TeV) energy while measuring the spectrum spanning from 50 TeV to a little over 1 peta-electron-volt (PeV).
- Gamma Ray Astronomy PeV EnergieS phase-3 (GRAPES-3) is designed to study cosmic rays

with an array of air shower detectors and a large area muon detector.

- It is located in Ooty, India.
- It is operated by the Tata Institute of Fundamental Research.
- It aims to probe the acceleration of cosmic rays in different astrophysical settings.
- Its objectives are to study:
 - o The origin, acceleration and propagation of $>10^{14}$ eV cosmic rays in the galaxy and beyond.
 - o Existence of “Knee” in the energy spectrum of cosmic rays.
 - o Production and/or acceleration of the highest energy ($\sim 10^{20}$ eV) cosmic rays in the universe.
 - o Astronomy of multi-TeV γ -rays from neutron stars and other compact objects.
- Cosmic rays were discovered more than a century ago.
- They are considered to be the most energetic particles in the universe.

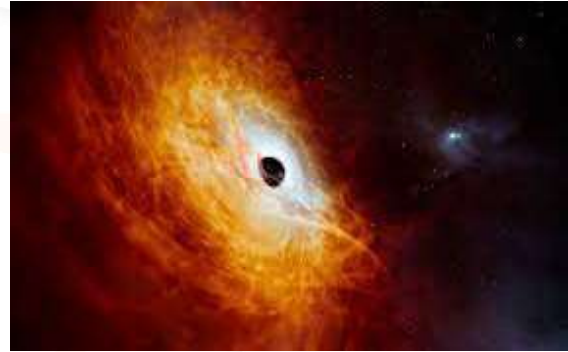
25. Magnetolectric Multiferroics

- Researchers have identified a unique mechanism of electric polarisation via magnetic ordering in a novel mineral named “MnBi₂S₄”, which can be useful for energy-efficient data storage.
- Magnetolectric multiferroics are a special class of materials popular among the research fraternity for their rarity and unique properties.
- These materials can exhibit both magnetism and ferroelectricity simultaneously.
 - For advanced technology applications like spintronics, electronic memory devices, and other electronic components like actuators and switches.
 - MnBi₂S₄ is also known as mineral gräpianite and belongs to the ternary manganese chalcogenide family.
 - It has distinct magnetic structures in the material, including a spin density wave, as well as cycloidal and helical spin structures.
- Importantly, they found that the last two spin structures induced ferroelectricity in the material.
- It is also known to be centrosymmetric and

undergoes magnetic ordering at low temperatures (27, 23, and 21.5 Kelvins).

26. Quasar: J0529-4351

- An international team of astronomers said the recently discovered quasar named J0529-4351 was the brightest and fastest-growing quasar discovered so far and had a supermassive black hole about 17 billion times the mass of the Sun.
- Quasar is an extremely active and luminous type of active galactic nucleus (AGN).



- An AGN is nothing more than a supermassive black hole that is active and feeding at the centre of a galaxy.
- All quasars are AGNs, but not all AGNs are quasars.
- Quasars are thought to form in regions of the universe where the large-scale density of matter is much higher than average.
- They are among the most luminous, powerful, and vibrant objects known in the universe.

27. Sora : GenAI Model

- OpenAI has introduced Sora, a new generative artificial intelligence (GenAI) model capable of converting text prompts into videos up to a minute long with maintained visual quality and adherence to user instructions.
- Sora can create complex scenes with multiple characters, accurate details, and vibrant emotions.
- It still faces challenges with more complex prompts.
- While other companies have ventured into text-to-video technology, Sora is not yet available for general use as OpenAI is ensuring safety protocols and gathering feedback from visual artists and filmmakers.

- The model has weaknesses, such as struggling with complex physics simulations and precise temporal descriptions, but OpenAI is continuously working to improve it.

28. GSLV-F14/INSAT-3DS Mission

- INSAT-3DS launched aboard the Geosynchronous Satellite Launch Vehicle F14 (GSLV F14).
- GSLV-F14 is a three-stage launch vehicle.
- The first stage (GS1) has a solid propellant motor and four earth-storable propellant stages (EPS).
- EPS includes a supporting structure, propellant tanks, and an engine.
- The second stage (GS2) is also an earth-storable propellant stage



- The third stage (GS3) is a cryogenic stage, with propellant loading of liquid oxygen (LOX) and liquid hydrogen (LH2).
- The GSLV-F14 is the 16th flight of the GSLV, and the 10th flight with the indigenous cryo stage.
- INSAT-3DS comprises four payloads, including an Imager, a sounder, a data relay transponder, and a satellite-aided search and rescue transponder.

SPECIES IN NEWS

1. Fire-Capped Tit



- Birders have spotted the trail of species flying back home including the fire-capped tit in the Aravalli hill region suggesting reverse migration as the season changes from winter to summer
- Fire Capped Tit is a small bird species assigned to the family Paridae.
- It is a Himalayan bird which flies down south towards Western Ghats and Kerala around Sept, and is back around Feb-end and March.
- Inhabits forest feeding on invertebrates, nectar and pollen, usually high in the canopy but will descend to low growth.
- It is found in montane broadleaf forests at middle to high elevations, sometimes mixed in with other species.
- These birds breed in the Himalayas during summer and have a melodious song.
- A local breeding summer visitor to northern mountains from Pakistan east to Arunachal Pradesh.
- Winters in foothills and rarely in plains south to Maharashtra and Madhya Pradesh.
- Conservation status -IUCN: Least Concern

2. Golden-Backed Frog

- Scientists made a surprising discovery in the foothills of the Western Ghats in India — a Bonnet mushroom growing out of the side of the Golden-backed Frog.
- Golden-backed Frog is endemic to the Western Ghats of Karnataka and Kerala, specifically above the Palghat Gap, where it is known to thrive in relative abundance.



- It is about the size of a human thumb.
- These frogs prefer to reside near streams, ponds, and other water bodies, where they can lay their eggs and find their food.
- They are primarily insectivorous and feed on a range of small insects and arthropods such as ants, beetles, and crickets.
- The major threats to the survival of these frogs are habitat loss and fragmentation, pollution of water bodies, and the introduction of non-native species.

3. Laughing Gull: Migratory Bird



- A Laughing Gull, a migratory bird native to North America, has been sighted for the first time in India.
- This discovery, verified by birding experts, increases India's total bird species count.
- The bird is known for its unique laughter-like calls, resembling human laughter.
- The laughing gull's presence in Kasaragod adds a new chapter to the region's rich biodiversity.
- Birdwatchers and researchers are eager to conduct further studies to understand the migratory patterns and the reasons behind this extraordinary visit.

Protection Status: IUCN Red List Status: Least Concern.

4. New Kangaroo Lizard Species



Scientists have discovered a new kangaroo lizard species from the Western Ghats.

Researchers named the new, scaly reptiles after the Evolutionarily Distinct and Globally Endangered of Existence (EDGE) program through the Zoological Society of London.

The new species *Agasthyagama edgeor* the northern kangaroo lizard belongs to the Agamidae family.

A group of scientists discovered the new species from the southern Western Ghats at Kulamavu in Idukki.

The species is the second one of the *Agasthyagama* genus after *A. beddomii* or Indian kangaroo lizard that has been previously reported from Sivagiri hills in Tamil Nadu.

5. *Sphaerotheca varshaabhu*: Species of Frog



Researchers from various national and international organisations have identified and documented a previously unknown species of frog which has been thriving amidst the urban landscape of Bengaluru.

Sphaerotheca varshaabhu is a new frog species.

Sphaerotheca Varshaabhu, meaning a genus of

frog which welcomes rain, has been attributed to its behaviour of coming out of burrows during the early showers.

The newly unearthed amphibian exhibits distinctive characteristics that set it apart from known frog species.

It has adapted to its urban surroundings displaying behaviours and physical attributes that help it navigate challenges posed by urbanisation.

The team utilised advanced genetic analysis, morphological studies and bioacoustics to confirm the distinctiveness of this newly discovered amphibian

6. Manatees



A record number of manatees converged at a Florida state park recently.

Manatees are large aquatic mammals, and sometimes they're referred to as "sea cows."

They belong to a group of animals called Sirenia. This group also contains dugongs.

Dugongs and manatees are very similar in appearance and behaviour, but there is one key difference, their tails.

Manatees have paddle-shaped tails, and dugongs have fluked tails, giving it a whale-like appearance.

Manatees inhabit shallow, marshy coastal areas and rivers.

Conservation Status: Manatee species are listed as 'Vulnerable' by the IUCN's Red List of Threatened Species.

7. Millipedes: New Genus Discovered

Researchers recently discovered a new genus and five new species of millipedes in remote African jungles.



- Millipedes are any member of the arthropod class Diplopoda i.e Arthropods are animals with hard exoskeletons and jointed limbs
- They are cylindrical or slightly flattened invertebrates.
- The word millipede translates to a thousand feet but while millipedes have many feet, none of them quite have a thousand.
- They're not insects.
- They are actually more closely related to lobsters, crayfish, and shrimp.
- There are approximately 12,000 species distributed worldwide.
- They are typically found in areas of high moisture and decaying vegetation, such as under trash, in piles of grass and leaves, etc.
- They are usually blackish or brownish in color, but some are also red, orange, or have mottled patterns.
- Their bodies are split into a number of segments, and each segment has two sets of legs that attach to the body's underside, except for the first (head) segment, which is legless, and the next three segments, which each contain one pair of legs.
- Most millipedes are nocturnal and are primarily scavengers, feeding on decaying plants and occasionally dead insects. , although some species attack the roots of living plants.

8. Trichoglossum: New Fungal Species

- Researchers recently discovered a new fungus species in Kerala named Trichoglossum syamviswanathii.
- Trichoglossum is a genus of fungus classified

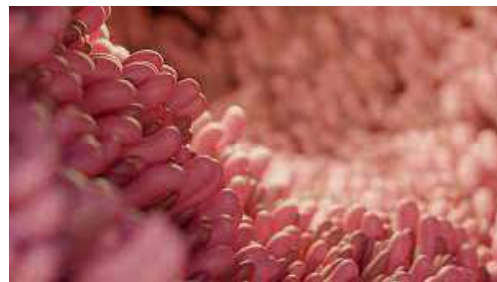


within the family Geoglossaceae (Ascomycota), commonly known as “hairy earth tongues” fungus due to their numerous filaments resembling mushrooms.

- They are black, dark, or brown in colour.
- They exhibit saprotrophic behavior but can also be found as endophytes in plant roots.
- 55 Trichoglossum genera have been identified globally. Of these, 21 are recognized species.
- They are globally distributed in tropical and temperate forests at least five out of seven continents of the world.
- They play a critical role in the decomposition of organic matter.

9. Obelisks: Virus-Like Entities

- Scientists recently uncovered a never-before-seen class of virus-like entities named obelisks in the human body.



- Obelisks are a newly discovered class of virus-like entities present in the human body.
- It comprises a class of diverse RNAs that have colonized and gone unnoticed in human and global microbiomes
- Named after the highly symmetrical, rod-like structures formed by their twisted lengths of RNA, the Obelisks' genetic sequences are only

around 1,000 characters (nucleotides) in size.

- These mysterious bits of genetic material have no detectable sequences or even structural similarities known to any other biological agents.
- They're also significantly larger than other genetic molecules that coexist inside cells, from plants to bacteria, called plasmids, which are more commonly composed of DNA.
- Obelisks represent their own class of organism. They lie somewhere between viruses and viroids.
- Although the hosts of other obelisks remain unknown, there is a possibility that some of them may be found in bacteria.
- Different types of Obelisks appear to be present in different areas of our bodies.

10. Stingless Bees

- To protect Amazon, conservators try to save pollinator Stingless bees.



- A stingless bee is a bee that appears very similar to a honeybee, but is incapable of stinging.
- These bees are eusocial, which means that they live together in hives and produce honey.
- These are native to the Amazon.
- Their honey, which is runny enough to be drunk like a liquid and is said to have a citrusy aftertaste.
- It is used by many Indigenous Peruvians as a natural medicine.
- Stingless bees can be found in most tropical and subtropical regions.
- These bees cannot sting but nature has made sure to give them other ways of defending themselves.
- These bees do possess stingers, but they are too small to be useful in defense. Instead of stinging, stingless bees use their mandibles to bite their attackers.
- The Amazon is home to hundreds of species of stingless bee, but as deforestation converts the tropical landscape into farms and ranches, these

and other native pollinators are in danger of disappearing.

11. Dusted Apollo: High-Altitude Butterfly

- Dusted Apollo (*Parnassius stenosemus*), a rare



- high-altitude butterfly, has been sighted and photographed for the first time in Himachal Pradesh.
 - Dusted Apollo is an extremely rare butterfly and has never been photographed before in Himachal Pradesh.
 - It is found from Ladakh to West Nepal and it flies between 3,500 to 4,800 metres in the inner Himalayas.
 - It closely resembles Ladakh Banded Apollo (*Parnassius stoliczkanus*) but the discal band on the upper fore wing in dusted Apollo is complete and extends from costa to vein one while this discal band is incomplete and extends only up to vein four in Ladakh Banded Apollo.
 - There are 11 Apollo species recorded from Himachal Pradesh and five of them are declared as Scheduled species.
 - It is an encouraging indication of the flourishing diversity of Apollo butterflies in the region.
 - Apollos are considered commercially important butterflies and they fetch high prices in the poaching industry.
 - Most of the Apollo butterflies are now endangered and need immediate attention for their conservation and protection.
- ## 12. Nematodes : New Species
- Scientists at the University of California, Riverside have unveiled a new species of nematode, *Steinernema adamsi*, a minuscule yet potent ally in the battle against crop pests.
 - Nematodes are any worm of the phylum Nematoda.

- Nematodes are among the most abundant animals on Earth.
- They occur as parasites in animals and plants or as free-living forms in soil, fresh water, marine



environments, and even such unusual places as vinegar, beer malts, and water-filled cracks deep within Earth's crust.

- Nematodes are bilaterally symmetrical, elongate, and usually tapered at both ends.

- Some species possess a pseudocoel, a fluid-filled body cavity between the digestive tract and the body wall.
- Nematodes have been reported from every continent on earth and occur in deserts, swamps, the oceans, the tropics and Antarctica.
- Nematode parasites of animals occur in almost all organs of the body, but the most common sites are in the alimentary, circulatory, and respiratory systems. Some of these worms are known by such common names as hookworm, lungworm, pinworm and threadworm
- They can cause a variety of diseases (such as filariasis, ascariasis, and trichinosis) and parasitize many crop plants and domesticated animals.
- Most nematodes feed on bacteria, fungi, or other microscopic creatures. As such, they are a major component of soil and sediment ecosystems

LOCATION IN NEWS

1. Aral Sea

- NASA's Earth Observatory posted a detailed analysis of the reason behind Aral Sea's disappearance.
- Aral Sea stands at the boundary between Kazakhstan to the north and Uzbekistan to the south.
- It was once a large saltwater lake of Central Asia and the world's fourth largest body of inland water.
- The remnants of it nestle in the climatically inhospitable heart of Central Asia, to the east of the Caspian Sea.
- The Aral Sea depression was formed toward the end of the Neogene Period
- It was made by waters from the Syr Darya and the Amu Darya rivers that were dependent on glacial melt.
- It drains Uzbekistan and portions of Kazakhstan, Tajikistan, Afghanistan, Turkmenistan, Iran, and Kyrgyzstan.
- The Aral Sea is located within the harsh climate region of Central Asia.
- The area experiences a desert-continental climate, characterised by hot summers, cold winters, and varying diurnal air temperature.

2. Sultanpur national park



- The Sultanpur National Park has observed a 20-30% decrease in the number of migratory birds this season, as reported by forest department officials.
- Estimates show a reduction in bird numbers, with current figures ranging between 8,000 to 10,000,

compared to the expected 15,000.

- Sultanpur NP is located at Sultanpur village on Gurugram-Jhajjar highway, 15 km from Gurugram, Haryana and 50 km from Delhi.
- It was a bird sanctuary, ideal for birding and bird lookers. Its area covers approximately 142.52 hectares.
- Migratory birds start arriving in the park in September. Birds use the park as a resting place till the following March-April.
- During summer and monsoon months the park is inhabited by many local bird species..
- The status of the park was upgraded to National Park in July 1991 under the Wildlife (Protection) Act, 1972.

3. Mount Etna



- Volcanic eruptions often make headlines only when iconic volcanoes like Etna, Kilauea, or Eyjafjallajokull erupt.
 - However, throughout any given year, our planet witnessed numerous volcanic eruptions, with as many as 50 to 80 occurring worldwide.
 - Mount Etna, located in Italy, holds the title of Europe's most active volcano.
 - Its recorded volcanic activity dates back to 1500 B.C., with over 200 eruptions documented since then.
 - Etna's recent eruptions have disrupted air travel, leading to flight cancellations at the nearby Catania airport.
- ## 4. Dagestan
- A recent incident involving anti-Israel protesters storming an airport in Makhachkala, Dagestan,



has drawn international attention.

- This incident highlights the unique position of Dagestan, which, while sounding like a country, is actually a province within Russia.
- Dagestan, officially known as the Republic of Dagestan, is a province within the Russian Federation, dispelling any confusion arising from its name.
- Situated in the southernmost part of Russia, it holds strategic importance for the country.
- Land of Mountains: Dagestan’s name translates to “land of the mountains,” emphasizing its mountainous terrain.
- North Caucasus: Located in the eastern part of the North Caucasus, it shares borders with Georgia and Chechnya to the west and Azerbaijan to the south. To the east lies the Caspian Sea.
- Inaccessible Terrain: Some areas within Dagestan’s mountains are so remote that reaching them requires helicopters.

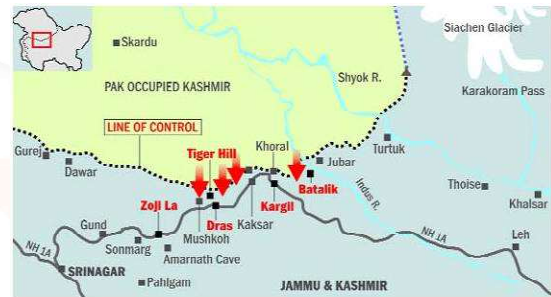


5. Rafah Crossing

- Palestinians have been gathering at the Rafah border crossing with Egypt in the southern Gaza Strip.
- Meanwhile, Egypt has opened the borders for UN humanitarian aid for Palestinians.
- The Rafah Crossing is a border crossing point

between the Gaza Strip and Egypt, located in the southern Gaza Strip.

- It serves as one of the few access points for people and goods to enter or exit the Gaza Strip, which is a Palestinian territory along the eastern coast of the Mediterranean Sea.
- Egypt has maintained strict movement restrictions at the Rafah crossing for years, raising concerns that it indirectly supports Israel’s Gaza blockade, which began in 2007 after Hamas



took control.

6. Gurez Valley

- The high-altitude passes within the Gurez valley, located in northern Kashmir, are now linked to the Mushkoh valley in the Drass Sector of Kargil, Ladakh. This region was a significant site during the 1999 war.
- The newly established 130-kilometer road has been opened to tourists, and one of its highest passes, Kaobal Gali, situated at an elevation of 4,166.9 meters in Gurez, serves as the vital link connecting these two valleys.
- Found in the Kashmir valley, Gurez is positioned near the Line of Control, which separates it from Pakistan-administered Kashmir’s Astore and Neelum districts.
- The local inhabitants are primarily ethnic Dards/Shins who speak the Shina language and share similar dress and cultural traditions with their counterparts in Pakistani-administered Gilgit-Baltistan.
- It is closely situated to the Line of Control (LoC), with the Kishanganga river delineating the border in multiple areas.
- Unique to the Gurez valley is the presence of villages constructed entirely of log houses, devoid of modern urban construction materials.
- The region boasts diverse fauna and wildlife,

including species such as the Himalayan brown bear, snow leopard, ibex, musk deer, and marmots.

With approximately 38,000 inhabitants, the



Gurez valley has already welcomed an impressive 50,000 tourists this year.

7. Lampedusa Island

- Lampedusa is the largest of the Italian Pelagic Islands in the Mediterranean Sea.
- It is located approximately 205 km southwest

of Sicily, 113 km east of Tunisia, and about 176 km north of Libya.

- It is part of the Sicilian region of Italy and is situated in the southern Mediterranean Sea.
- It covers an area of approximately 20.2 square km (7.8 square miles).
- It has a rich history, with influences from various civilizations, including the Phoenicians, Romans, Arabs, and Normans.
- During World War II, the island was of strategic importance and saw military activity.
- It has been part of Italy since 1860.
- Lampedusa has been a focal point for migration from Africa to Europe, with many migrants and refugees attempting to reach the island by boat.
- This has led to humanitarian challenges and efforts to manage immigration.
- The island has received international attention for its role in rescue operations and the reception of migrants and asylum seekers.

M I S C E L L A N I O U S

1. Messinian Event

- The Geological Institute of Israel recently uncovered a never-before-known underwater canyon near Cyprus that dates back to the Messinian Event.
- Messinian Event also known as the Messinian Salinity Crisis (MSC), the Messinian event was a geological event during which the Mediterranean Sea went into a cycle of partial or nearly complete desiccation (drying up).
 - It was one of the most severe ecological crises in the Earth's history.
 - The MSC began approximately 6 million years ago (MYA) and lasted until around 5.3 MYA.

2. Support to Students for Participating In Competitions Abroad (SSPCA) Initiative

- Support to Students for Participating in Competitions Abroad (SSPCA) is an initiative of the All India Council for Technical Education (AICTE) aimed at bolstering the global competitiveness of Indian students in technical education.
- It is designed to financially support students aspiring to compete in international scientific events.
- Under the SSPCA scheme, individual students or student teams are eligible to receive travel grants to partake in international competitions.
- The assistance encompasses financial aid, mentorship, logistical support, and networking opportunities, enabling students to represent India on a global platform effectively.
- Financial aid provided by the AICTE scheme reaches up to Rs 2 lakh per student, covering various expenses like international and domestic travel, registration fees, visa applications, accommodation, airport taxes, travel insurance, and equipment costs related to the competition.
- Eligibility extends to students enrolled in diploma, B.E./B. Tech, integrated M. Tech, and M./M. Tech programs in AICTE-approved institutions.

- Each team of students is eligible for financial support under the scheme once during their course of study.

3. Aadi Mahotsav 2024

- Aadi Mahotsav is organised by Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) under the aegis of the Ministry of Tribal Affairs, and will showcase the rich diversity of India's tribal heritage.
- It is not only a platform to exhibit the extraordinary talent and craftsmanship of tribal artisans but also an opportunity to interact, learn, and contribute to the empowerment of tribal communities.
- The festival will feature an expanded showcase with over 300 stalls, offering varied display of Tribal art, handicrafts, natural produce, and delectable tribal cuisine.

4. Dhokra Shilpkala

- Chhattisgarh's Ocher Studio is helping to preserve India's 4,000-year-old craft- Dhokra Shilpkala
- Dhokra Shilpkala is believed to be derived from the Dhokra Damar tribes, who are the traditional metal smiths of Central India.
- The origins of Dhokra Shilpkala can be traced back to the tribal communities residing in the regions of Chhattisgarh, Jharkhand, West Bengal, and Odisha, where it evolved as an integral part of their cultural and religious practices.
- It uses technique of metal casting, which involves using the lost wax casting method, also known as cire perdue.
- Artisans draw inspiration from nature, mythology, and everyday life, incorporating motifs such as animals, birds, deities, and tribal symbols into their creations.
- From miniature figurines and jewellery to larger-than-life sculptures and functional objects, Dhokra Shilpkala encompasses a wide range of artistic expressions.

5. 1000-Year-Old Stone Statue Of Mahavira : Tamil Nadu

- Archaeology students and professors in Tamil Nadu recently unearthed a rare 1000-year-old stone statue of Mahavira, the 24th tirthankara of Jainism.
- Lord Mahavira was the twenty-fourth and the last Tirthankara of the Jain religion.
- Mahavir was born in 599 B.C. as a prince in Bihar. At the age of 30, he left his family and royal household gave up his worldly possessions, including clothing, and became a monk.
- He followed an extreme ascetic life, attaining kaivalya, the stage of omniscience or highest perception.
- Mahavira advocated nonviolence (ahimsa) in all circumstances and the acceptance of the mahavratas, the five “great vows” of renunciation.
- Five great vows: Nonviolence (Ahimsa): not to cause harm to any living beings, Truthfulness (Satya): to speak the harmless truth only, Non-stealing (Asteya): not to take anything not properly given, Chastity (Brahmacharya): not to indulge in sensual pleasure, Non-possession/Non-attachment (Aparigraha): complete detachment from people, places, and material things.

6. Dhenkanal Magji: GI Tag

- Dhenkanal Magji is a type of sweet made from cheese from buffalo milk, with distinct characteristics in terms of appearance, taste, flavour, shape, and size.
- It also has unique nutritional values that distinguish it from other cheese-based sweets.
- The region was the hinterland of buffalo milk production and cheese was the third largest produce, after milk and curd.

- The Mandar-Sadangi area of Gondia block is believed to be the centre of origin of the sweet stuff, which has now been spread to the entire district.

7. Subika Painting

- Subika Paintings is a style of painting which is intricately linked to the Meitei community’s cultural history.
- It is surviving through its six manuscripts — Subika, Subika Achouba, Subika Laishaba, Subika Choudit, Subika Cheithil and Thengrakhel Subika.
- Although the royal chronicle, Cheitharol Kumbaba, doesn’t mention a specific founder, there is a possibility that this art form existed when the writing tradition was introduced in the state.
- Experts estimate the use of Subika paintings since the 18th or 19th century.
- The painting of Subika Laishaba is a composition of cultural motifs made by pre-existing features and other influences stimulated by their cultural worldviews.
- Among the six manuscripts, Subika Laishaba represents a direct and authentic continuation of the Meitei cultural tradition depicted through visual images.
- The illustrations of Subika Laishaba have visual language from the elements such as lines, shapes, forms, colours, and patterns.
- These visual images become Meitei’s cultural motif, and structure to create visual effects as well as express cultural significance, meaning and values.
- The visual images found in this manuscript are painted on handmade paper.
- It is also found that the materials of manuscripts are prepared indigenously either handmade paper or barks of trees.

PRACTICE QUESTIONS

1. Consider the following statements regarding the Ramsar Convention and newly designated Ramsar Sites in India:
 1. World Wetlands Day is celebrated globally to commemorate the adoption of the Ramsar Convention on 2nd February 1971.
 2. India ratified the Ramsar Convention in 1982, and its total Ramsar sites have increased from 26 to 80 in the last ten years.
 3. Magadi Kere Conservation Reserve is one of the newly designated Ramsar Sites and is located in Tamil Nadu.

(a) 1 and 2
(b) 2 and 3
(c) 1 and 3
(d) All of the above
2. What is the primary focus of Exercise Vayu Shakti-24 conducted by the Indian Air Force?

(a) Naval Operations
(b) Cybersecurity Drills
(c) Offensive and Defensive Capabilities
(d) Search and Rescue Operations
3. What does the GHAR portal integrate with for nationwide tracking?

(a) Right to Education (RTE) Act
(b) Commission for Protection of Child Rights (CPCR) Act
(c) Track Child Portal
(d) Protection of Children from Sexual Offences (POCSO) Act
4. Consider the following statement with respect to Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY):
 1. This scheme is an extension of Fisheries and Aquaculture Infrastructure Development Fund (FIDF).
 2. The aim of the scheme is gradual formalization of fisheries sector and enhances access to institutional credit.Which of the statements given above are correct?

(a) Only one
(b) Only two
(c) Both 1 and 2
(d) Neither 1 nor 2
5. Consider the following statements:
 1. Payment banks are eligible for Marginal Standing Facility as provided by Reserve Bank of India (RBI).
 2. Payment Banks can take deposits however the deposits can be invested in government securities only in the form of Statutory Liquidity Ratio (SLR).
 3. They can provide lending facilities by tying up with registered NBFCs.How many of the given statements are correct?

(a) Only one
(b) Only two
(c) All three
(d) None
6. What is the primary objective of the SWATI Portal recently launched in India?

(a) To promote cultural diversity
(b) To address challenges in environmental science
(c) To represent Indian Women and Girls in STEM
(d) To facilitate international collaborations in research
7. Which region is the Golden-backed Frog endemic to in India?

(a) Eastern Ghats
(b) Western Ghats
(c) Thar Desert
(d) Deccan Plateau
8. The scheme of electoral bonds is said to conflict with the Representation of Peoples Act, 1951, mainly because:

(a) It aligns with the Act's requirement for disclosure of contributions.
(b) It fails to disclose contributions and expenditure, undermining transparency.
(c) It promotes equality among political parties based on vote share.
(d) It encourages transparency and disclosure.

9. Where is Lampedusa located geographically?

- (a) North of Sicily
- (b) East of Tunisia
- (c) South of Sicily
- (d) West of Libya

10. What is the expected outcome of the eROSITA telescope's survey, according to the passage?

- (a) Mapping the entire solar system
- (b) Observing the evolution of supermassive black holes
- (c) Studying the atmospheres of distant exoplanets
- (d) Analyzing the composition of asteroids in the asteroid belt

ANSWER KEY

1	2	3	4	5
(a)	(c)	(c)	(b)	(b)
6	7	8	9	10
(c)	(b)	(b)	(c)	(b)

TOPIC FOR THE MONTH

Topic of the month

ELECTORAL BOND SCHEME

Context: Constitution Bench of Supreme Court in an unanimous verdict has pronounced the Electoral Bond Scheme for political funding as unconstitutional.

Electoral bonds are interest-free bearer instruments, which means that they are payable to the bearer on demand, similar to a promissory note. The scheme allows corporations and individuals to anonymously donate money to political parties by purchasing electoral bonds from the State Bank of India (SBI). Notably, the SBI has sole access to the details of those who purchased electoral bonds. According to the scheme, the proceeds from any bonds, which are not encashed within 15 days of being issued, are to be deposited in the Prime Minister Relief Fund.

BACKGROUND OF PRESENT SCENARIO

- Electoral Bond scheme was challenged shortly after it was announced in January 2018, by a number of parties, including the Communist Party of India (Marxist), Common Cause and the Association for Democratic Reforms (ADR).
- The Election Commission also filed an affidavit to the SC on some provisions in the scheme, which can have serious repercussions on political funding in the country.
- The case was heard by a 5-judge constitution bench of the Supreme Court led by Chief Justice of India for three days from October 31 to November 2 last year.
- The Supreme Court gave its final verdict on February 15.
- It Struck down the Electoral Bond and associated amendments as unconstitutional.
- The SC asserted that the Electoral Bond violated the fundamental right to information guaranteed under Article 19(1) (a) of the Constitution.

RATIONALE BEHIND INTRODUCTION OF ELECTORAL BONDS

1. **To curb black money**
 - To reduce using illicit means of funding and the system was wholly opaque and ensured complete anonymity.
 - Payments made for the issuance of the electoral bonds are accepted only by means of a demand draft, cheque or through the Electronic Clearing System or direct debit to the buyers' account.
 - Limiting the time for which the bond is valid ensures that the bonds do not become a parallel currency.
2. **Eliminate fraudulent political parties**
 - That were formed on pretext of tax evasion, as there is a stringent clause of eligibility for the political parties in the scheme.
3. **Protects donor from political victimization**
 - As non-disclosure of the identity of the donor is the core objective of the scheme.

KEY ELEMENTS OF INDIA'S ELECTORAL BOND SCHEME

1. **Donor Eligibility**
 - Donors must be citizens of India or entities incorporated or established in India.
 - Bonds can be purchased individually or jointly with other individuals.
 - KYC (Know Your Customer) details must be provided by every donor, with their names kept confidential.
2. **Receiver Eligibility**
 - Only political parties registered under Section 29A of the Representation of the People Act, 1951, and securing at least one percent of the votes in the last General Election are eligible to receive the bonds.

3. **Authorized Bank**

- Electoral bonds can only be encashed by eligible political parties through a bank account with the authorized bank.
- The State Bank of India (SBI) was authorized to issue and encash bonds through its 29 designated branches.

4. **Denominations**

- Bonds are issued in denominations of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore.

5. **Validity**

- Electoral bonds are valid for fifteen calendar days from the date of issue.
- Bonds deposited by eligible political parties in their accounts are credited on the same day.

CONCERNS RELATED TO ELECTORAL BONDS

1. **Lack of Transparency**

- Donors and recipients remain undisclosed, leading to concerns about hidden influence and biased policy decisions.

2. **Potential for Undue Influence**

- Anonymity opens doors to quid pro quo scenarios where donors seek favorable policies in return for donations.

3. **Unequal Playing Field**

- Larger political parties benefit from attracting more significant anonymous donations, creating an uneven playing field.

4. **Misuse of State Machinery**

- Ruling parties may gain leverage by accessing donor information through the State Bank of India (SBI), potentially influencing donors' decisions.

5. **Impact on Policy Decisions**

- Policies might be skewed in favor of big donors, compromising governance and public interest.

6. **Money Laundering Risk**

- Anonymity in electoral bonds could facilitate the laundering of illicit funds, posing a risk to the integrity of the political financing system.

CONCERNS HIGHLIGHTED BY INSTITUTIONS

Reserve Bank of India (RBI):

- RBI objected to allowing other banks to issue electoral bonds, fearing it could undermine trust in banknotes and the financial system.
- RBI raised concerns that the anonymity of intermediate transactions could violate anti-money laundering principles, suggesting alternative payment methods like cheques or electronic transfers.
- The central bank warned of the potential misuse of electoral bonds by shell companies for money laundering and forgery, posing a threat to financial integrity.

Election Commission of India (ECI)

- ECI highlighted the lack of transparency due to anonymous donations through electoral bonds, preventing reporting under the Representation of the People Act and hindering transparency in political funding.
- The Commission expressed concerns that unlimited corporate funding through electoral bonds could increase the risk of black money usage, especially through shell companies.

SUPREME COURT'S VERDICT ON THE ELECTORAL BONDS

1. **Invalidation of the Scheme**

- The Court struck down the Electoral Bonds Scheme on the grounds that it violated the voters' right to information about political funding, as guaranteed under Article 19(1)(a) of the Constitution.
- It emphasized that the right to know takes precedence over donor anonymity in political party funding.

2. **Invalidation of Legal Amendments**

- Additionally, the Court invalidated the amendments made to various laws such as the Representation of the People Act, the Companies Act, and the Income Tax Act, which facilitated the implementation of the Electoral Bonds Scheme.

- These amendments were deemed to compromise the transparency and integrity of the electoral process.
- 3. Concerns about Corruption and Quid Pro Quo**
 - The Court expressed concerns regarding potential corruption and quid pro quo arrangements facilitated by the scheme and its associated amendments.
 - It highlighted the risk of corporations exerting undue influence on the electoral process in exchange for favorable policy changes or licenses.
 - 4. Emphasis on Democratic Principles**
 - The verdict underscored the importance of upholding democratic principles, particularly the principle of one person, one vote.
 - It argued that economic inequality in political contributions undermines these principles and poses a threat to free and fair elections.

GROUNDNS ON WHICH SC HELD ELECTORAL BONDS TO BE UNCONSTITUTIONAL

- 1. Violation of Right to Information**
 - The anonymity of electoral bonds was deemed to violate the right to information of voters and citizens, as well as the transparency of political funding implicit in Article 19 (a) of the Constitution.
 - Access to information about the funding of political parties was considered essential for voters to make informed choices in a democracy.
- 2. Breach of Equality Principle**
 - The scheme discriminates among political parties based on their vote share, favoring the ruling party and major opposition parties over smaller and regional parties.
 - This unfair advantage distorts the level playing field in politics. Additionally, the scheme creates a disparity between donors and voters, allowing donors to exert influence over political decisions while keeping voters uninformed.
- 3. Contravention of Constitutional Electoral Reforms**
 - The Electoral Bonds scheme runs counter to the constitutional objective of combating corruption and criminalization in politics.
 - Furthermore, the scheme conflicts with the Representation of Peoples Act, 1951, which mandates political parties to disclose their contributions and expenditures, thus undermining the electoral reform framework.
- 4. Potential for Quid-Pro-Quo Arrangements**
 - The opacity of financial support for political parties was seen as potentially leading to quid-pro-quo arrangements due to the close nexus between money and politics.
- 5. Failure to Meet the Restrictive Means Test**
 - The Electoral Bonds scheme was found to fail the restrictive means test of the doctrine of proportionality.
 - The court noted that there are alternative means to curb black money other than electoral bonds.

SUPREME COURT DIRECTION

- State Bank of India (SBI), which issues electoral bonds, has been directed to cease issuing these bonds immediately.
- As per the court's directive, the SBI must provide details of political parties that received electoral bonds since 2019 to the Election Commission of India (ECI) by March 6. Subsequently, the ECI is tasked with publishing these details on its official website.

KEY LAWS INVALIDATED BY THE SUPREME COURT

- 1. Representation of the People Act, 1951 (Section 29C)**
 - **Original Provision:** Required reporting of donations over Rs 20,000 by political parties.
 - **Finance Act, 2017 Amendment:** Exempted donations through Electoral Bonds from reporting.
 - **Supreme Court Verdict:** Struck down the amendment, balancing voters' right to information and donor privacy.

2. Companies Act, 2013 (Section 182)

- **Original Provision:** Limited corporate donations and required disclosure.
- **Finance Act, 2017 Amendment:** Removed donation cap and disclosure requirement.
- **Supreme Court Verdict:** Invalidated the amendment due to potential undue corporate influence.

3. Income-tax Act, 1961 (Section 13A)

- **Original Provision:** Required disclosure of donations over Rs 20,000.
- **Finance Act, 2017 Amendment:** Excluded Electoral Bond donations from disclosure.
- **Supreme Court Verdict:** Reversed the changes, citing violation of voters' right to information.

IMPLICATION OF SUPREME COURT JUDGEMENT

1. Enhanced Transparency and Accountability

- The ruling will lead to greater transparency and accountability in political funding.
- With the disclosure of the source and amount of funding received by political parties through electoral bonds, the public will have the means to scrutinize party finances and hold them accountable for their actions and decisions.

2. Reduction of Money and Corporate Influence

- By removing the veil of anonymity surrounding donors, the judgment aims to reduce the influence of money and corporate power in politics.
- With donors unable to conceal their identities, there will be less opportunity for undue influence and lobbying by vested interests, leading to a more equitable and democratic political process.

3. Levelling the Playing Field

- The verdict seeks to level the playing field for all political parties. By ensuring that parties are not discriminated against based on their size or popularity, smaller and regional parties will have a fair chance to compete with larger parties.
- This will promote diversity and pluralism in the political landscape, offering voters a genuine choice in elections.

GOVERNMENT'S ARGUMENTS FOR THE ELECTORAL BONDS

1. Reduce Cash Usage

- By mandating payments through formal banking channels, like demand drafts or cheques, the scheme aimed to enhance transparency in political financing.

2. Combat Black Money

- KYC procedures for buyers and disclosure requirements for recipient parties helped prevent the circulation of illicit funds, ensuring transparency in contributions.

3. Protect Donor Anonymity

- Donors' identities were kept confidential to prevent potential coercion, while banking records deterred misuse.

4. Enforce Safeguards

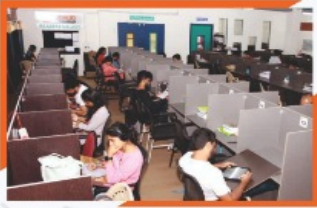
- Stringent KYC compliance and eligibility criteria for political parties ensured the scheme's integrity, preventing fraudulent activities.

WAY FORWARD

- Switch to complete digital transactions.
- Donations above a certain limit be made public to break the corporate-politico nexus.
- Political parties should be brought under the ambit of RTI.
- Establish a national electoral fund where donors contribute and funds are distributed among different parties.

Mains practice

“The Right to Information Act is not all about citizens' empowerment alone; it essentially redefines the concept of accountability.” Discuss. (2018)



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