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मराठी

मासिक आवृत्ती | जानेवारी 2024

ज्ञानकोश

मासिक चालू घडामोडी
(महाराष्ट्र राज्य)

MPSC, आणि सरळ सेवा भरतीसाठी
ZP, आदिवासी विभाग, जिल्हा न्यायालय आणि इतर स्पर्धा
परीक्षांसाठी उपयुक्त



आयातीवर सरकारचे निर्बंध

मुंबई ट्रान्स हार्बर लिंक (MTHL)

अयोध्या राम मंदिर प्राणप्रतिष्ठा सोहळा

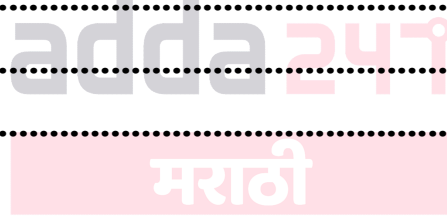
रश्मी शुक्ला यांची महाराष्ट्राच्या
DGPपदी नियुक्ती

राष्ट्रीय युवा दिन

छत्रपती शिवाजी महाराज उद्यान कला
महोत्सव

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National News

First girls' Sainik School opened in Mathura

- Defence Minister Rajnath Singh inaugurated the **Samvid Gurukulam Girls Sainik School, the first all-girls Sainik School, at Vrindavan in Mathura, Uttar Pradesh.**
- The school is set up under the partnership mode initiative that aims to establish 100 new Sainik Schools.

Key points

- The first all-girls Sainik School, with a strength of approximately 870 students, has been inaugurated under the initiative of **establishing 100 new Sainik Schools in partnership mode** with non-governmental organisations (NGO), private and State government schools in all State/Union Territories, of which 42 have been set up
- The objectives behind the vision of setting up of 100 new Sainik Schools are to **provide quality education to the students in tune with the National Education Policy, 2020** and give them better career opportunities, including joining the armed force

Tehreek-e-Hurriyat declared 'unlawful body'

- The Union Home Ministry declared **Tehreek-e-Hurriyat, Jammu and Kashmir (TeH)** an "unlawful association" under **Section 3 of the anti-terror law, the Unlawful Activities (Prevention) Act (UAPA).**
- The TeH is one of the constituents of the **All Party Hurriyat Conference (APHC)** and was founded by separatist Syed Ali Shah Geelani

About UAPA

- UAPA was passed in **1967.**
- It aims at effective prevention of unlawful activities associations in India.
- Unlawful activity refers to any action taken by an individual or association intended to disrupt the territorial integrity and sovereignty of India.
- The Act assigns **absolute power to the central government**, by way of which if the Centre deems an activity as unlawful then it may, by way of an Official Gazette, declare it so.
- It has **death penalty and life imprisonment as highest punishments.**

- Under UAPA, both Indian and foreign nationals can be charged.

Govt. restrictions on imports

The Commerce and Industry Ministry has issued a **Quality Control Order** for a slew of electrical accessories and put the imports of screws in the prohibited category from its current 'free' status.

Key points

- The **Department for Promotion of Industry and Internal Trade (DPIIT)** mandated Bureau of Indian Standards (BIS) certification for all products included under an Electric Accessories (Quality Control) Order, 2023
- The Centre also scrapped the 'free' import status for screws of various kinds that have a **CIF value of less than ₹129 per kilogram.**
- The CIF value refers to the landed cost of imported goods, including insurance and freight.

'Prithvi' programme for earth observation

- The Union Cabinet cleared a ₹4,797-crore programme called '**Prithvi**' (Earth) that is expected to subsume five existing schemes of the **Ministry of Earth Sciences (MoES).**
- A major component of the Ministry is the **Deep Ocean Mission or DOM** [one of whose objectives is to send a manned submersible 6,000 metres into the Indian Ocean].

Key points

- The Prithvi programme broadly **subsumes all of our other major activities**
- These programmes are to improve and increase
 - long-term observations of the atmosphere,** ocean, geosphere, cryosphere, and solid earth to track changes in the planet;
 - develop models to understand and predict weather, ocean and climate hazards,
 - and understand the science of climate change;
 - explore polar and high-seas regions of the earth to discover new phenomena and resources;
 - develop techno-logy for exploration and sustainable harnessing of oceanic resources for societal applications;

- and translate knowledge and insights from earth system science into services for societal, environmental, and economic benefit.

Indian Landslide Susceptibility Map

- **IIT-Delhi team** makes first hi-res landslide risk map for India
- The '**Indian Landslide Susceptibility Map**' is the first of its kind by virtue of being on a national scale in the country.
- The map and the researchers' study will be published in the **journal Catena in its February 2024 issue.**

Key points

- Landslides are a unique and deadly problem. They are less widespread and harder to track and study with satellites.
- Landslides happen in localised areas and affect only about **1-2% of the country.**
- The map acknowledged some well-known regions of high landslide susceptibility, like **parts of the foothills of the Himalaya, the Assam-Meghalaya region, and the Western Ghats.**
- It also revealed some previously unknown places with high risk, such as **some areas of the Eastern Ghats, just north of Andhra Pradesh and Odisha.**

Centre notifies revised rules for quality control of pharma products

- The Union Health Ministry notified revised rules under **Schedule M of the Drugs and Cosmetics Rules, 1945.**
- It aimed at ensuring robust quality control for pharma and biopharmaceutical products.

Key points

- Schedule M prescribes the **Good Manufacturing Practices (GMP)** for pharmaceutical products and the revised Schedule M has been notified as rules to ensure that GMP is adhered to and requirements of premises, plant, and equipment for pharmaceutical products are met.
- The GMP is the mandatory standard that builds and brings quality into a product by way of control of materials, methods, machines, processes, personnel, facility/environment and so on.

- **GMP was first incorporated in Schedule M of the Drugs and Cosmetics Rules, 1945 in 1988 and was last amended in June 2005.**
- With the amendment, the words '**Good Manufacturing Practices**' (GMP) have been replaced with '**Good Manufacturing Practices and Requirements of Premises, Plant and Equipment for Pharmaceutical Products**'.

DGCA revises duty norms for pilots

- The **Directorate General of Civil Aviation (DGCA)** has revised the norms regulating their duty hours by **reducing night-time flying and enhancing weekly rest.**
- This is being done following the concerns raised by pilots over mounting fatigue due to increased flying in a fast-growing domestic aviation market.

About Directorate General of Civil Aviation

- The DGCA is an attached office of the **Ministry of Civil Aviation, Government of India.**
- The DGCA is the **regulatory body in the field of Civil Aviation** and primarily deals with safety issues.
- The DGCA is responsible for regulating air transport services to/from/within India.
- The regulatory body is also **responsible for the enforcement of civil air regulations, air safety and airworthiness standards.**
- It also coordinates all regulatory functions with the **International Civil Aviation Organisation (ICAO).**

New hit-and-run law protests

- Transporters and commercial drivers from States like Maharashtra, Chhattisgarh, West Bengal, and Punjab have staged protests against the recent legislation concerning hit-and-run incidents.
- **Section 106 (2) of the Bharatiya Nyaya Sanhita, 2023 (BNS)** stipulates a penalty of up to 10 years in jail and a fine for fleeing an accident spot and failing to report the incident to a police officer or a magistrate.
- This law is in addition to the colonial-era provision on causing of death due to rash or negligent acts under **Section 304A of the Indian Penal Code, 1860.**

Think: Learn about the reasons and concerns of protests.

IIT Delhi team makes first hi-res landslide risk map for India

- Indian Institute of Technology Delhi (IIT Delhi) has made groundbreaking strides in disaster preparedness by crafting the first-ever high-resolution landslide susceptibility map for the entire country.
- This map, aptly named the 'Indian Landslide Susceptibility Map,' is a crucial tool for identifying areas prone to landslides, allowing for proactive mitigation strategies and saving lives.

I-STEM to launch Samavesha project at IISc Bengaluru

- I-STEM (Indian Science, Technology, and Engineering facilities Map) is launching the Samavesha project at IISc., Bengaluru to enhance research collaboration in India by enhancing accessibility to facilities and labs.
- The project targets connecting researchers with scientific institutes through an online portal.

MUMBAI TRANS HARBOUR LINK (MTHL)

The inauguration of the Mumbai Trans Harbour Link (MTHL), India's longest sea bridge, by the Prime Minister, marked a transformative phase for Mumbai's real estate sector.

Key Points:

Monumental Engineering Feat:

- Inaugurated on January 12, 2024, the MTHL is officially named **Shri Atal Bihari Vajpayee Trans Harbour Link (Atal Setu)**, also known as Sewri-Nhava Sheva Trans Harbour Link.
- This **21.8 km, 6-lane bridge** connects Mumbai with Navi Mumbai, spanning Thane Creek.
- Comprising a **16.5 km sea link and 5.5 km of viaducts on land**, it stands as India's longest sea bridge and the 12th longest globally.

Engineering Innovations:

- The bridge showcases the first use of orthotropic decks in India, allowing for longer spans and increased structural efficiency.
- Equipped with advanced traffic monitoring and surveillance systems, the MTHL prioritizes safety and security.

Reconstitution of EPFO governing body

The Union government reconstituted the **Central Board of Trustees (CBT)** of the **Employees**

Provident Fund Organisation (EPFO) by excluding representatives of the **Indian National Trade Union Congress (INTUC)**, **All India Trade Union Congress (AITUC)** and **All India United Trade Union Centre (AIUTUC)** from the panel.

About EPFO

- Employees' Provident Fund Organisation (EPFO) was **established by an act of Parliament of India**.
- It aims to provide social security to workers working in India.
- It came into force by the **Employee Provident Fund and Miscellaneous Provision Act, 1952**.
- EPFO comes under the control of the **Ministry of Labour and Employment**, Government of India.

South India leads in pension enrolment

- South India currently has the highest number of **National Pension System (NPS)** private sector enrolments
- Some **31% of private sector enrolments comprising NPS corporate and NPS All Citizen** so far this financial year were from the Southern region.
- Southern region's share in enrolment in **NPS Corporate in FY24 is 39% and for All Citizen it is 29%**
- Also, some 36% of women participation in NPS Corporate subscriber base came from the Southern region, again highest in the country.

ICMR starts revising current National Essential Diagnostics List

- The **Indian Council of Medical Research (ICMR)** has begun the process of revising the current **National Essential Diagnostics List (NEDL)**
- The NEDL lists the essential and most basic tests that should be available at various levels of healthcare facilities in the country, including at the village level, in sub-health centres, health and wellness centres, and primary health centres
- The **ICMR defined essential diagnostic tests** as those that satisfy the priority health care needs of the population and are selected with due regard to disease prevalence and public health relevance, evidence of efficacy

and accuracy, and comparative cost-effectiveness.

digitally in languages included in the **8th Schedule of the Constitution.**

About ICMR

- Indian Council of Medical Research (ICMR) is the **apex body in India for the formulation, coordination and promotion of biomedical research.**
- Its mandate is to conduct, coordinate and implement medical research for the benefit of the Society; translating medical innovations into products/processes and introducing them into the public health system.
- It is funded by the Government of India through the **Department of Health Research, Ministry of Health & Family Welfare.**

'Minorities' right to open institutions

The Supreme Court observed that the right given to religious and linguistic minorities to establish and administer their own educational institutions under **Article 30(1) of the Constitution** was not intended to "ghettoize" them.

Key points

- The minority character of an educational institution is not lost if its founders, who belong to a particular minority community, chose administrators from other communities, including the majority group, to run the institution
- **Article 30 does not mandate** that the administration of a minority educational institution should be only by members of that community
- The provision confers on the minority the discretion to choose the administrators of the institution.

Textbooks in regional languages

- The Union Education Ministry directed all school and higher education regulators such as the National Council of Educational Research and Training (NCERT) and the Indira Gandhi National Open University, the heads of Indian Institutes of Technology, Central Universities, and the National Institutes of Technologies, and the University Grants Commission **to make study material available in regional languages for all courses in the next three years.**
- Study material for all courses under school and higher education would be made available

Ayodhya Ram Mandir Pran Pratishtha Ceremony

- Prime Minister Narendra Modi is set to preside over the '**pran-pratishtha**' ceremony at the Ram Mandir in Ayodhya, marking the consecration of the 51-inch idol of Ram Lalla.
- Crafted by sculptor **Arun Yogiraj, the idol depicts a five-year-old Lord Ram**

Important details

- Temple Name- Shri Ram Mandir (popularly known as Ram Mandir)
- Location- Ayodhya, Uttar Pradesh, India
- Dedication- Lord Shri Rama
- Significance- Built at Ram Janmabhoomi, birthplace of Lord Shri Rama
- **Construction Style- Indian Nagar Style**
- **Architect- Chandrakant B. Sompura (CBS)**
- Construction Company- Larsen and Toubro (L&T)
- Project Management Company- Tata Consulting Engineers Limited (TCEL)

Ayodhya Ram Mandir History From 1528-2024 Period Event

16th Century-The temple was attacked and destroyed by Babur.

1767- The earliest record of the mosque in Descriptio Indiae.

1853- The first instance of religious violence was documented.

1858- British administration prohibits Hindu rituals.

1949- Murtis of Rama and Sita were installed inside Babri Masjid.

1950- The state took control of the mosque; Hindus allowed worship.

1980s- Vishwa Hindu Parishad (VHP) launches movement for a temple.

1989- VHP leaders conduct Shilanyas, laying the foundation adjacent to the disputed site.

1992- Demolition of the mosque by VHP and BJP rally; inter-communal violence ensues.

2005- Terrorist attack on makeshift Ram temple; attackers killed.

2019- Supreme Court's verdict on Ayodhya dispute; land handed to Shri Ram Janmabhoomi Teerth Kshetra trust.

2020- Government approves plan for temple construction; land allocated for a new mosque in Dhannipur village

Ram Mandir Murti

- The Statue of Rama is a planned monument in Ayodhya, Uttar Pradesh, India. It will be **181 meters (594 ft) tall, and 251 meters (823 ft) tall including the plinth and umbrella.**
- The idol of Ramlala, which depicts Lord Ram as a five-year-old child, was revealed days before the consecration ceremony on Monday. The idol was made by the famous sculptor Arun Yogiraj from Karnataka. The new idol will be called **Achal Murti, while the old idol will be called Utsav Murti**

Indigenous Mobile Hospital (BHISHM) Deployed in Ayodhya

- **Two Arogya Maitri Disaster Management Cube-BHISHM, revolutionary mobile hospitals** equipped with cutting-edge technology, have been deployed in **Ayodhya** to bolster medical readiness.
- This cube is a part of the broader initiative named **“Project BHISHM” – Bharat Health Initiative for Sahyog, Hita and Maitri, is tailored to treat up to 200 casualties,** emphasizing rapid response and comprehensive care.
- The whole unit contains **72 easily transportable components** that can be conveniently carried by hand, cycle, or even drone, providing unmatched flexibility.
- In the face of mass casualty incidents (MCIs), where requirements range from basic aid to advanced medical and surgical care, the Aid Cube stands out with its ability to be deployed within an astonishing **12 minutes.**
- The **state-of-the-art BHISHM software system integrated into a provided tablet** allows operators to locate items quickly, monitor their usage and expiry, and ensure readiness for subsequent deployments.

T.N. Cabinet approves new policy aimed at ‘holistic development of women

- The Tamil Nadu Cabinet approved the **State’s New Policy for Women**
- The policy is aimed at holistic development of women, and focused on empowering them through education, economic independence and power sharing
- A State-level committee headed by Chief Secretaries and district-level committees headed by Collectors will be constituted to monitor the implementation of the policy.

- The State government has been implementing many women empowerment schemes such as **Vidiyal Payanam, Kalaingar Magalir Urimai Thogai, and construction of working women’s hostel** in many districts.

Vaibhav’ Fellows to build long-term research synergy

The **Department of Science and Technology (DST)** announced the first batch of Fellows of the Vaibhav scheme meant to attract Indian-origin scientists based abroad for short-term collaboration.

About Vaibhav

- The fellowship offers Non-Resident Indian (NRI) researchers an opportunity to work for a minimum of one month to a maximum of two months a year with a research institution or an academic institution in India.
- **Duration:** Three years with the government offering the researchers an amount of up to Rs 37 lakh for the entire period.
- **Aim:** Improving the research ecosystem of India’s Higher Educational Institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world.

French President to attend ‘shobha yatra’ in Jaipur

- A ‘shobha yatra’, or public procession, in Jaipur is expected to be the high point of **French President Emmanuel Macron’s visit to the pink city.**
- Jaipur has been chosen by the Indian hosts as the first stopover for the French President
- He will be the chief guest at the Republic Day parade in New Delhi.

Centre releases three-drug regimen for treating leprosy

- The Union government has approved a new treatment regimen for leprosy, aiming at stopping its transmission at the **sub-national level by 2027.**
- The WHO says leprosy is a chronic infectious disease caused by **Mycobacterium leprae.**
- The bacteria are transmitted via droplets from the nose and mouth during close and frequent contact with untreated cases.

- Leprosy, reported from all the six WHO regions, is curable with multi-drug therapy (MDT).
- The WHO's recommended treatment regimen consists of three drugs — **dapsone, rifampicin and clofazimine**. The combination is referred to as MDT. The duration of treatment is **six months for PB and 12 months for MB cases**. MDT kills the pathogen and cures the infection.
- The majority of new cases detected are from Southeast Asia.

Union govt. makes it clear that Aadhaar card no proof of citizenship, birth date

- Aadhaar cards and PDF versions emphasize they are "**proof of identity, not of citizenship or date of birth.**"
- The inclusion of explicit disclaimers signals caution to government departments and organizations against using Aadhaar for citizenship or date of birth verification.

Historical Context:

- The invalidity of Aadhaar for determining date of birth and citizenship has been established since 2018.
- A 2018 memorandum clarified that Aadhaar is not a proof of date of birth per se, as it relies on a different document provided by applicants.
- A Bombay High Court judgment in the previous year reinforced this stance, cited in a December 2023 circular by UIDAI.

Key Points:

Aadhaar and Citizenship:

- Aadhaar has never served as **proof of citizenship**, as foreign nationals residing in India for **180 days** are also eligible to obtain it.
- Government departments, despite this, have accepted Aadhaar for purposes typically reserved for citizens or adults.

EPFO's Decision:

- Employees' Provident Fund Organisation (EPFO) has **stopped accepting Aadhaar as proof of date of birth**.
- EPFO circular issued on January 16 removes Aadhaar from the list of acceptable documents for proving date of birth.

Recent Warning Update:

- The warning initially only mentioned Aadhaar not being a proof of citizenship last year but now clarifies that it is not a proof of date of birth either.

- The warning is now visibly imprinted on all Aadhaar cards and digital copies issued to Indian residents.

State News

Kerala's Internet cable project

Prime Minister Narendra Modi inaugurated the **Kochi–Lakshadweep submarine optical fibre cable project**.

Key points

- It was implemented at a **cost of ₹1,072 crore**
- It will connect the islands to high-speed internet for the first time, after years of relying on limited satellite bandwidth.
- The undersea cable link "**will ensure 100 times faster Internet for the people of Lakshadweep**
- Kavaratti, Lakshadweep's capital, will be connected along with the islands of Agatti, Amini, Kadmat, Chetlet, Kalpeni, Minicoy, Androth, Kiltan, Bangaram and Bitra
- The cables have been laid by the **state-owned telco BSNL**, while the project was executed by the **Japanese firm NEC**.

Silambattam

- The **martial dance of Tamil Nadu** is called Silambattam.
- The **dancers do mock combat with various weapons**, such as sticks, clubs, sword, horns, daggers etc, one kind of weapon at a time.
- The mock combat is done in pairs.
- The drum music for the dance is provided by **Sendai Melam**, i.e. group of three to four drummers playing the drum Sendai in unison.

Greenfield corridors in Kerala

- Union Minister for Road Transport and Highways Nitin Gadkari announced **greenfield corridors aimed at enhancing road connectivity in Kerala**.
- He virtually inaugurated three projects and laid the foundation stone for nine national highway projects totalling 105 km and costing ₹1,464 crore under the **Bharat Pariyojana scheme**.

Key points

- One of the greenfield corridors is the 121-km **NH-966 Kozhikode-Palakkad** stretch estimated at ₹10,371 crore. The stretch will

reduce travel time between Palakkad and Kozhikode from four to one-and-a-half hours.

- The **NH-744 Kollam-Sengottai stretch** and the **Thiruvananthapuram Outer Ring Road** are the other greenfield corridors.
- Additionally, the **SH1/NH 183 Thiruvananthapuram-Kochi stretch**, Kutta Malappuram Economic Corridor, and the NH-544 Angamali-Kundanur stretch will be upgraded for improved connectivity under the project.

Black fluid blankets Manipur rivulet, alert sounded

- The Manipur Government on January 11 sounded an alert after a gooey black fluid blanketed a rivulet on Jan 10 night.

About

- A thick, viscous black fluid has mysteriously covered a rivulet in Manipur, raising concerns about environmental contamination and potential health risks.
- The incident occurred near the Loktak Lake which is a Ramsar wetland of international importance.

Chhattisgarh govt. launches scheme for Ayodhya visit

- Chhattisgarh has approved its **Ram Lala Darshan (Ayodhya Dham) Yojana**.
- Under the scheme, 20,000 eligible residents of the State would be taken to the holy city for pilgrimage every year.

PM unveils three projects worth ₹4,000 crore in Kochi

- Three infrastructure projects were unveiled by the PM in Kochi.
- It included a new dry dock and an **international ship repair facility (ISRF)** of **Cochin Shipyard Ltd (CSL)** and an **LPG import terminal of Indian Oil Corporation Limited** at Puthuvypeen

Key points

- The new projects, including the **country's largest dry dock**, would catalyse the development of Kerala and southern parts of the country.

- The new dry dock would enable big vessels to dock here for repairs, reducing dependence on foreign countries and thus saving foreign exchange.
- The ISRF would transform Kochi into **South Asia's largest ship-repair centre**.

Andhra becomes 2nd State to take up 'caste census'

- The Andhra Pradesh government kicked off its comprehensive caste census **to enumerate all communities in the State**
- With this initiative, Andhra Pradesh has become the **second State in the country after Bihar** to take up a caste census.

International News

Carbon Border Adjustment Mechanism (CBAM)

- CBAM is part of the **"Fit for 55 in 2030 package"**, which is the EU's plan to reduce greenhouse gas emissions by at least **55% by 2030** compared to 1990 levels in line with the European Climate Law.
- The CBAM is a policy tool **aimed at reducing Carbon Emissions** by ensuring that imported goods are subject to the same carbon costs as products produced within the EU.

International Court of Justice (ICJ)

Israel faces Gaza 'genocide' case by S. Africa at International Court of Justice (ICJ).

About the International Court of Justice (ICJ):

- The ICJ, also known as the **World Court**, is the principal **judicial organ of the UN**.
- It was **established in June 1945** by the Charter of the United Nations and began work in April 1946.
- The seat of the Court is at the **Peace Palace in The Hague (Netherlands)**.
- Of the six principal organs of the United Nations, it is the only one not located in New York, United States.
- The hearings of the ICJ are always public.
- **French and English** are the official languages of the Court.

Rapid decline in India-Maldives ties

- Ties between India and the Maldives have witnessed a worrying downward spiral in recent months.
- This sudden shift, marked by diplomatic tensions and public animosity, raises concerns about the future of regional stability and cooperation.

Triggering factors:

1. Anti-India remarks by Maldivian officials
2. Change in Maldivian government.
3. Geopolitical influences

Red Sea trouble impact on India

- The Red Sea, a crucial artery for global trade, has become turbulent due to recent attacks by Yemeni rebels.
- This "trouble" has sent ripples through India's trade, impacting various sectors and raising concerns.

Impact:

1. Increased Shipping Costs
2. Disruptions in Trade Flows
3. Potential Price Hike
4. Impact on Crude Oil Imports.

UAE govt. to set up tourism township at hill station in Kerala

- The United Arab Emirates (UAE) government has evinced interest in developing a tourism township at a hill station in Kerala at an altitude of around 3,000 ft above mean sea level.
- The State has identified Wagamon/Munnar to set up the tourism township
- Munnar, located around 5,200 ft above mean sea level, is a popular destination for both domestic and foreign tourists.
- Wagamon, located over 3,000 ft above sea level, is an emerging destination and a getaway for those looking to spend time in the lap of nature.

Turkiye ratifies Sweden's NATO membership

Turkiye's Parliament ratified Sweden's NATO membership after more than a year of delay.

- It has become the 32nd member of the security alliance

About NATO

- Formed in 1949 with the signing of the Washington Treaty, NATO is a security alliance of 30 countries from North America and Europe.
- Recently, Finland joined the alliance as 31st member.
- NATO's fundamental goal is to safeguard the Allies' freedom and security by political and military means.
- It is a system of collective defence where independent member states agree for mutual defence in case of any attack by external party.
- Article 5 of the Washington Treaty states that an attack against one Ally is an attack against all.
- This article forms the core of the Alliance, a promise of collective defense.

Headquarter - Brussels, Belgium.

Appointment News

Vice-Chief of Naval Staff

Vice-Admiral Dinesh K. Tripathi took over as the Vice-Chief of the Naval Staff (VCNS)

Key Points

- Vice-Admiral V. Srinivas took over as 30th FOCINC of the Southern Naval Command at the Naval Base in Kochi
- Before taking over as the FOCINC, Vice-Admiral Singh served as the VCNS at Naval Headquarters.
- He was commissioned in 1986 into the Executive Branch of the Navy.

Head of 16th Finance commission

- The government appointed former NITI Aayog Vice-Chairman Arvind Panagariya Chairman of the 16th Finance Commission
- It will recommend the tax revenue sharing formula between the Centre and States for the five-year period beginning April 2026.

About FC

- It is a constitutional body constituted every 5 years by the President of India under Article 280 of the Indian Constitution to define the Centre-states financial relations.
- The First Commission was established in 1951 under The Finance Commission (Miscellaneous Provisions) Act, 1951.
- Individual commissions operate under the terms of reference (ToR) which are different for

every commission, and they define the terms of qualification, appointment and disqualification, the term, eligibility and powers of the Finance Commission.

- As per the constitution, the Commission consists of a chairman and four other members.

Genocide Convention

Recently, South Africa had moved the ICJ, invoking the **Convention on the Prevention and Punishment of the Crime of Genocide, 1948**, against Israel, accusing it of committing genocide during its ongoing military campaign in Gaza.

About

- The Genocide Convention, 1948, was the **first human rights treaty to be adopted by the UN General Assembly**.
- It primarily arose from a commitment to 'never again' allow mass killing of people such as the Holocaust.
- South Africa's case is based upon **Article II which says genocide means acts such as killing members of a national, racial, ethnic or religious group**; causing serious bodily and mental harm to the members of the group; and deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part.
- It has **also accused Israel of causing hunger, dehydration, and starvation in Gaza** by impeding sufficient humanitarian assistance, cutting off water, food, fuel, and electricity, and failing to provide shelter or sanitation to Palestinians in Gaza, including its 1.9 million internally displaced people.

India's KABIL acquires five lithium blocks in Argentina

- India announced the acquisition of five lithium blocks in Argentina.
- **Khanij Bidesh India Ltd. (KABIL)**, operating under the Ministry of Mines, signed an agreement with Argentina's state-owned **Catamarca Minera Y Energética Sociedad Del Estado (CAMYEN)** based in Catamarca province.

Key points

- KABIL, which has obtained exploration and exclusivity rights for the blocks, will start exploration and development of the five lithium

brine blocks — **Cortadera-I, Cortadera-VII, Cortadera-VIII, Cateo-2022-01810132, and Cortadera-VI** — covering an area of about 15,703 hectares.

- KABIL was preparing to set up a branch office at Catamarca, officials told businessline, adding that the project cost (for development and exploration) was about ₹200 crore and would be spread over a five-year period.

Key fact

India's lithium requirements, amounting to about ₹24,000 crore, are met through imports, with the bulk of supplies coming from China. Often called '**white gold**', lithium is key to the 'green transition' and is used in energy storage solutions, batteries for mobile phones, and in EVs.

Economy News

KABIL to invest over ₹200 cr. to secure lithium in Argentina

- India's KABIL (Khanij Bidesh India Ltd.) will invest ₹211 crore over a five-year-period for exploration of five lithium blocks in **Fiambala area of Argentina**.
- An exploration and development agreement is expected to be signed with **CAMYEN, a state-owned miner in Argentina's Catamarca province**
- **Chile and Argentina account for 30-35% of the world's lithium supplies.**

NSO estimate on India's GDP

- India's real GDP growth in 2023-24 is estimated at **7.3%, compared to 7.2%** a year ago, as per the first advance estimates of national income released by the **National Statistical Office (NSO)**
- The economy will outperform the 7% uptick recently projected by the **Reserve Bank of India (RBI)**.
- GVA growth for the farm sector is **estimated to more than halve from 4% a year ago to 1.8% this year**, as is the case for Trade, Hotels, Transport, Communication and Services.

National Statistical Office (NSO)

NSO acts as the nodal agency under the **Ministry of Statistics and Programme Implementation** for planned development of the statistical system in the country

- It **lays down and maintains norms and standards** in the field of statistics, involving concepts and definitions, methodology of data collection, processing of data and dissemination of results.
- The National Statistical Office(NSO) consists of the **Central Statistical Office (CSO)**, the **Computer center and the National Sample Survey Office (NSSO)**.
- It compiles and releases the **Index of Industrial Production (IIP)** every month in the form of 'quick estimates'; conducts the **Annual Survey of Industries (ASI)**; and provides statistical information to assess and evaluate the changes in the growth, composition and structure of the organized manufacturing sector.

Direct tax collections cross 80% of 2023-24 target

- India's net direct tax collections have touched ₹14.7 lakh crore, meeting over four-fifths of this year's target and reflecting a growth of 19.4% over the same period of 2022-23.
- The provisional direct tax collections continue to register 'steady growth' with gross collections rising 16.77% to ₹17.18 lakh crore, led by a 26.11% rise in Personal Income Tax (PIT) inflows.
- Corporate Income Tax or CIT collections grew at a relatively muted pace of 8.32%.

EU's carbon border tax

- The EU's Carbon Border Adjustment Mechanism (CBAM), also known as the carbon border tax, is a policy that aims to level the playing field for European industries facing stricter carbon emission regulations compared to their non-EU counterparts.
- It essentially puts a price on the carbon emissions embedded in certain imported goods, such as cement, steel, aluminum, fertilizers, electricity, and hydrogen.
- The EU's ambitious goal is to achieve climate neutrality by 2050 requires significant reductions in greenhouse gas emissions.

Rupee falls 4 paise to 83.05 against U.S. dollar

- The Indian rupee has depreciated 4 paise to close at 83.05 against the US dollar.
- A key factor behind the rupee's decline is the renewed selling pressure from foreign investors.
- Concerns about rising global crude oil prices and potential interest rate hikes in the US prompted portfolio withdrawals, draining the Indian market and putting downward pressure on the rupee.

Schemes and Committees News

Bharatmala Pariyojana

- It is an **umbrella program for the highways sector** that focuses on optimizing efficiency of freight and passenger movement across the country.
- This will be done by development of **Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressways.**

PM-JANMAN

Prime Minister will release ₹540 crore — the first instalment of funding — for pucca homes under the **Pradhan Mantri Awas Yojana-Gramin (PMAY-G)** to one lakh **Particularly Vulnerable Tribal Group (PVTG)** beneficiary families as part of the recently launched PM-JANMAN package for the overall development of PVTG habitations.

About

- PM JANMAN is a government scheme that aims to **bring tribal communities into the mainstream.**
- The scheme (**comprising Central Sector and Centrally Sponsored Schemes**) will be implemented by the Ministry of Tribal Affairs, in collaboration with the State governments and the PVTG communities.
- The scheme will concentrate on 11 critical interventions overseen by 9 line Ministries, ensuring the implementation of existing schemes in villages inhabited by PVTGs.
- It **encompasses various sectors, including safe housing under the PM-AWAS Scheme, access to clean drinking water, improved**

healthcare, education, nutrition, road and telecommunications connectivity, as well as opportunities for sustainable livelihoods.

- The plan also includes the establishment of **Van Dhan Vikas Kendras** for trading in forest produce, off-grid solar power systems for 1 lakh households, and solar street lights.

Pradhanmantri Suryodaya Yojana

- PM Modi announces scheme to **install rooftop solar systems in 10 million homes**
- It has a target of installing rooftop solar on 1 crore houses

Key points

- The **Pradhanmantri Suryodaya Yojana's main objective** is to **provide electricity to low and middle-income individuals** through solar rooftop installations.
- It also aims to offer additional income for surplus electricity generation.

Agreement News

Satellite for Mauritius

- The Cabinet approved an agreement between the **Indian Space Research Organisation and the Mauritius Research and Innovation Council** to jointly develop a "small satellite."
- It is expected to cost **₹20 crore**.

India, Saudi Arabia discuss defence ties

- India and Saudi Arabia discussed ways to enhance **navy-to-navy cooperation**, joint training, and opportunities for joint ventures in defence production
- Discussions were held on **issues of mutual strategic interests**, bilateral defence cooperation, opportunities for joint ventures in defence production and technology collaboration and joint military training, duly affirming stronger ties between both nations.

India, U.K. sign two deals

- **India and the United Kingdom** signed a **Memorandum of Understanding (MoU)** for a bilateral international cadet exchange programme and a **Letter of Arrangement (LoA)** on defence collaboration in research and development.
- The LoA on R&D was signed between the Defence Research and Development

Organisation and the U.K.'s Defence Science and Technology Laboratory.

U.S. officials to come to India to discuss bilateral ties

Top U.S. diplomats will travel to Delhi to discuss bilateral issues, energy cooperation and possible dates for the Quad Summit with U.S.-Australia-Japan-India leaders

About QUAD

- The Quad is aimed at promoting **regional security and economic cooperation** in the Indo-Pacific region.
- The four countries share a common interest in **maintaining a free and open Indo-Pacific**, promoting democracy, human rights, and the rule of law, and countering China's expanding influence in the region.
- The Quad has held several meetings at the ministerial and leaders' level to discuss issues such as maritime security, infrastructure development, and supply chain resilience.
- The Quad is seen as a **mechanism for balancing China's influence** in the region, although its members have stressed that it is not a military alliance and is open to other countries who share their values and interests.

Airbus, Tata to set up India's first private copter assembly line

Context:

- **Airbus Helicopters and Tata Group** collaborate to establish a Final Assembly Line (FAL) for civil helicopters in India.
- This marks India's first private-sector helicopter assembly facility, with a focus on Airbus' popular H125 single-engine civil helicopter.

Key Points:

Key Details of the Partnership:

- **Tata Advanced Systems Limited**, a Tata Group subsidiary, will join forces with Airbus Helicopters to set up the assembly facility.
- The facility's primary purpose is to manufacture the **H125 helicopter** for the Indian market and export to neighboring countries.
- Airbus and Tata are concurrently working on a **FAL in Vadodara for the C-295 military transport aircraft**, part of a larger contract with the Indian Air Force.
- Airbus specifies that the **FAL in India will handle critical tasks such as integration of**

major components, avionics, and mission systems.

Ranks and Report News

SC report on toilets for women in district courts

- Nearly **one-fifth of the district court complexes** in the country lack separate toilets for women, according to a report published by the **Centre for Research and Planning of the Supreme Court** recently.
- The report named **'State of the Judiciary'** — underscored the necessity of women-friendly toilets, stating that sanitary napkin vending machines have been provided at only **6.7% of the toilets meant for women**.
- The report also revealed that most district courts did not have toilets for transgender persons and emphasised the need for **"gender-inclusive toilets"** in every court complex.

Health Ministry survey on Antibiotics

- A Health Ministry survey was released.
- It highlights that Over half of the almost 10,000 patients surveyed recently were given antibiotics to prevent infection, rather than to treat it, amid growing concerns about the rise in resistance to antibiotics
- As much as **94% of the patients** surveyed were given antibiotics before the confirmation of a definitive medical diagnosis of the precise cause of infection.

About Antimicrobial resistance (AMR)

- The **World Health Organization (WHO)** has identified antimicrobial resistance (AMR) as one of the top threats to public health.
- It is a **natural phenomenon as bacteria evolve, making drugs used to treat infections less effective**.
- One of the main drivers for the development of antibiotic resistance is the excessive and inappropriate use of antibiotics.

About National Centre for Disease Control (NCDC)

- The NCDC is the **nodal agency for India's national programme on AMR** containment, of which one of the key components is the surveillance of antibiotic usage.

To achieve this goal, it has established the **National Antibiotic Consumption Network (NAC-NET)**

through which network sites compile data on antibiotic consumption in their respective health facilities and send it to the NCDC.

'World came close to the critical 1.5 degree Celsius limit in 2023'

- **2023 was a year of unprecedented heat, with the global average temperature hovering just shy of the critical 1.5°C threshold above pre-industrial levels.**
- This proximity to the tipping point serves as a stark warning about the accelerating pace of climate change and the urgent need for drastic action

About:

- **2023 was officially declared the hottest year on record** by multiple agencies, surpassing even the scorching temperatures of 2016.

Nov. factory output growth drops to 8-month low of 2.4%

Context:

- India's industrial output growth experienced a significant decline, reaching an eight-month low of **2.4% in November**.
- This comes after a notable high of 11.6% recorded in October.
- The deceleration was particularly evident in manufacturing output, which expanded at the slowest pace in seven months, registering a mere 1.2%.

Key Points:

Contractions in Key Sectors:

- Consumer durables production witnessed a notable decline of **5.4%**, reaching its lowest level since June 2021, during the second wave of the COVID-19 pandemic.
- Electricity generation also decreased to its lowest level since February 2023, despite a 5.8% year-on-year increase, compared to a 20.4% uptick in October.
- Only six out of 23 manufacturing segments recorded growth in November.
- Notable increases were observed in **coke and refined petroleum products** (14.2%) and other transport equipment (9.8%).

Impact of Base Effects and Sequential Contractions:

- Base effects from **November 2022**, when the **Index of Industrial Production (IIP)** rose by

7.6%, played a role in moderating the growth rate.

- Sequential contractions in electricity and manufacturing further contributed to the overall decline.

What is IIP?

Definition: The Index of Industrial Production (IIP) is an index which shows the growth rates in different industry groups of the economy in a stipulated period of time. The IIP index is computed and published by the Central Statistical Organisation (CSO) on a monthly basis.

Description: IIP is a composite indicator that measures the growth rate of industry groups classified under,

1. Broad sectors, namely, Mining, Manufacturing and Electricity
2. Use-based sectors, namely Basic Goods, Capital Goods and Intermediate Goods.

The Base Year for IIP is 2011-2012.

NCDC survey on Antibiotics

- According to the NCDC survey, **In 13 out of 20 hospitals, more than 70% of patients** were given at least one dose of antibiotic
- The findings of the report are worrying as India is among the few countries where **antimicrobial resistance** is notably high.
- Such resistance develops when antimicrobials, which include antibiotics, are misused or overprescribed.

Key fact

According to the WHO, antimicrobial resistance was directly responsible for **1.27 million global deaths in 2019 and contributed to 4.95 million deaths**

About NCDC

- The National Centre for Disease Control (NCDC), formerly **National Institute of Communicable Diseases (NICD)**, had its origin as the Central Malaria Bureau, established at **Kasauli (Himachal Pradesh) in 1909.**
- NICD was transformed into the **National Centre for Disease Control (NCDC)** with a larger mandate of controlling emerging and re-emerging diseases in 2009.
- It functions as the nodal agency in the country **for disease surveillance facilitating prevention and control** of communicable diseases.

- It is also a national level institute for training specialized manpower for public health, laboratory sciences and entomological services and is involved in various applied research activities.

ILO on unemployment

- As per International Labour Organisation (ILO)'s **'World Employment and Social Outlook: Trends 2024'** report
- Global unemployment rate is set to increase in 2024 while growing social inequalities remain a concern.
- Joblessness and the jobs gap have both fallen below pre-pandemic levels but global unemployment will rise in 2024.

CEEW study on rise of rainfall

- The study — authored by **Council on Energy, Environment and Water (CEEW)**, a research and policy think tank — **analysed high-resolution meteorological data** spanning four decades, from 1982 to 2022, which has been recorded by the India Meteorological Department (IMD).
- According to it, Rainfall is increasing in more than half of **India's 4,400-odd tehsils or sub-districts**
- While 55% of tehsils have seen a rise in rainfall, about 11% have experienced a fall.

ASER study on basics maths ability

- The **Annual Status of Education Report (ASER)** released a report titled **"Beyond Basics"**
- It involved a survey by the civil society organisation **Pratham among rural students aged 14 to 18.**
- The household survey, conducted in 28 districts across 26 States, assessed the foundational reading and arithmetic abilities of 34,745 students.
- It **discussed the activities students are engaged in**, their basic and applied reading and maths abilities and digital awareness and skills.

Key findings

- Overall, 86.8% of 14- to 18-year-olds are enrolled in an educational institution. There are small gender gaps in enrolment, but notable differences are visible by age.

- The percentage of youth not enrolled is 3.9% for 14-year-old youth and is 32.6% for 18-year-olds
- Most of the people in this age group were enrolled in the **Arts/Humanities stream**.
- In **Class 11 or higher, more than half are enrolled in the Arts/Humanities stream (55.7%)** and girls are less likely to be enrolled in the Science, Technology, Engineering, and Mathematics stream (28.1%) than boys (36.3%)
- More than half struggle with division (3-digit by 1-digit) problems. Only 43.3% of 14-18-year-olds are able to do such problems correctly.

India's domestic air passenger traffic

- India's domestic air passenger traffic is expected **to touch 300 million by 2030, an almost two-fold rise from the 153 million in 2023**
- The country would still remain one of the most under-penetrated markets among the top 20 globally, **moving up from existing 3-4% to 10-15% by the end of decade.**

Gender equity in education

- The latest **Annual Status of Education Report** shows that while girls and boys from rural India equally aspire to become doctors or engineers, when it comes to choosing **Science, Technology, Engineering, and Mathematics (STEM) courses**, it is boys who take up STEM courses more than girls.
- Data from one of the largest competency-based sample surveys in school education, **the National Achievement Survey (2017)**, covering over 22 lakh students, shows parity in learning levels between boys and girls in elementary and secondary classes across the country.

Production of sugar

- Production of sugar from October 1, 2023, to January 15, 2024, stood at 149.52 lakh tonne compared with 157.87 lakh tonne during same period last season.
- The **production is lower this year in Maharashtra, Karnataka and Gujarat.**

Science and Technology News

XPoSat

- The Indian Space Research Organisation (ISRO) launched **PSLV-C58 X-ray Polarimeter Satellite (XPoSat) mission**
- The successful launch put India in an elite category as it has become the second nation to send an observatory **to study astronomical sources such as black holes, neutron stars among others.**

Key points

- XPoSat is **only the second X-ray polarimetry mission** in the world, after **NASA's Imaging X-ray Polarimetry Explorer (IXPE)** launched in 2021.
- It is the **first dedicated scientific satellite from ISRO** to carry out research in space-based polarisation measurements of X-ray emission from celestial sources.
- It carries two payloads, namely **POLIX (Polarimeter Instrument in X-rays)** and **XSPECT (X-ray Spectroscopy and Timing)**. POLIX has been developed by the Raman Research Institute and XSPECT by the Space Astronomy Group of URSC, Bengaluru.
- During the mission, the **PSLV Orbital Experimental Module-3 (POEM-3)** experiment was also executed to meet the objective of 10 other payloads.

GSAT-20

NewSpace India Ltd. (NSIL), the commercial arm of the Indian Space Research Organisation, will launch **GSAT-20 (renamed GSAT-N2)**, on board SpaceX's Falcon-9 rocket

Key points

- The GSAT-20 is a **high-throughput Ka-band satellite (HTS)**, which will be fully owned, operated and funded by the NSIL.
- GSAT-20 offers **Ka-Ka band HTS capacity with 32 beams** having pan-India coverage, including the Andaman and Nicobar and Lakshadweep islands.
- The satellite, **weighing 4,700 kg, offers an HTS capacity of nearly 48 Gpbs** and has been specifically designed to meet the demanding service needs of remote and unconnected regions.

New antibiotic for drug-resistant bacterium

- Researchers have identified a new class of antibiotics with the potential to tackle a **drug-resistant bacterium, Acinetobacter baumannii. Zosurabalpin**
- The antibiotic was found to be effective against **CRAB (carbapenem-resistant Acinetobacter baumannii)**-induced pneumonia and sepsis in mouse models.
- The **identification and analysis of the antibiotic zosurabalpin** that can kill Acinetobacter baumannii, antibiotic-resistant strains of which are hard to treat in the clinic.

VIPER

- VIPER stands for **Volatiles Investigating Polar Exploration Rover**.
- It is a robot the size of a golf cart that NASA will use to explore the moon's south pole.
- **Astrobotic, a private company**, developed it as part of the Commercial Lunar Payload Services program.
- This **robotic mission is designed to search for volatiles**, which are molecules that easily vaporize, like water and carbon dioxide, at lunar temperatures.
- These materials could provide resources for future human exploration on the moon.
- The **VIPER robot will rely on batteries, heat pipes and radiators** throughout its 100-day mission, as it navigates everything from the extreme heat of lunar daylight — when temperatures can reach 224 degrees Fahrenheit (107 degrees Celsius) — to the moon's frigid shadowed regions that can reach a mind-boggling -240 degree Celsius.

ISRO tests fuel cell-based power system in space

- The Indian Space Research Organisation (ISRO) has successfully tested a **100 W-class Polymer Electrolyte Membrane Fuel Cell-based Power System (FCPS)** in its orbital platform, POEM3
- The FCPS payload is significant as it has potential applications in India's space station which is proposed to come up by 2035.
- It provided a wealth of data on the performance of various static and dynamic systems that formed part of the power system and the physics at play.

Oldest evidence of photosynthesis

- A paper published in the journal **Nature** revealed that the **oldest evidence of photosynthetic structures** reported to date has been identified inside a collection of **1.75-billion-year-old microfossils**.
- The discovery helps to shed light on the evolution of oxygenic photosynthesis.

Key points

- Oxygenic photosynthesis is unique to cyanobacteria and related organelles within eukaryotes.
- It is in which sunlight **catalyses the conversion of water and carbon dioxide** into glucose and oxygen.

Aditya-L1

- The Indian Space Research Organisation (ISRO) has placed the **Aditya-L1 spacecraft in a halo orbit around the Lagrangian point (L1)**.
- India's maiden solar mission, Aditya-L1, reached the L1 point, 127 days after it was launched on September 2, 2023.

Key points

- Aditya-L1 is the first space based observatory class Indian solar mission to study the Sun from a substantial **distance of 1.5 million kilometers**. It will take approximately 125 days to reach the L1 point.
- The mission **aims to provide valuable insights into the solar corona, photosphere, chromosphere, and solar wind**.
- The primary objective of Aditya-L1 is to gain a deeper understanding of the Sun's behavior, including its radiation, heat, particle flow, and magnetic fields, and how they impact Earth.

Europa Clipper

- Europa Clipper is a **robotic solar-powered spacecraft** built to conduct the first detailed investigations of **Jupiter's icy moon Europa**.
- The spacecraft will orbit Jupiter and make nearly **50 flybys of Europa** to determine whether there are places below Europa's surface that could support life.
- Europa Clipper will launch in **October 2024** on a SpaceX Falcon Heavy rocket from Kennedy Space Center in Florida.
- The spacecraft will fly by **Mars**, then back by **Earth**, using the gravity of each planet to increase its momentum.

- These so-called “**gravity assists**” will provide Europa Clipper with the velocity needed to reach Jupiter in 2030.

Goal:

- After it begins orbiting Jupiter, Europa Clipper will spend about a year altering its trajectory to prepare for its first Europa flyby.
- The spacecraft will then spend about three years soaring past Europa dozens of times and sending data back to Earth.
- Over the course of the mission, the spacecraft will investigate nearly the entire moon.

Europa Clipper Fast Facts

- With its solar arrays deployed, Europa Clipper **spans more than 100 feet (about 30 meters) – about the length of a basketball court.**
- The spacecraft has **24 engines.**
- Europa Clipper will orbit Jupiter and make nearly **50 flybys of Europa.**
- The spacecraft has 9 dedicated science instruments, plus gravity/radio science.
- At launch, Europa Clipper will weigh approximately **13,000 pounds (6,000 kilograms).** Nearly **6,000 pounds (2,750)** will be propellant.

Superconductivity

- Superconductivity refers to a state in which a **material offers zero, or near-zero, resistance to electric current.**
- This phenomenon is observed in certain materials at very low temperatures, typically close to **absolute zero (-273.15°C or 0 Kelvin).**
- In superconductors, electrical resistance drops to virtually zero, allowing electric current to flow through them without any loss of energy due to resistance.

Lunar Trailblazer

- NASA has recently invested in a class of small, low-cost planetary missions called **SIMPLEx**, which stands for **Small, Innovative Missions for PLANetary Exploration.**
- These missions save costs by tagging along on other launches as what is called a rideshare, or secondary payload.
- One example is the Lunar Trailblazer.
- Lunar Trailblazer will look for water on the moon.
- Lunar Trailblazer will orbit the moon, measuring the temperature of the surface and

mapping out the locations of water molecules across the globe.

Jammu CSIR lab finds cannabis plant compound has antibiotic effects

- **Scientists at CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu, have found that phytocannabinoids, a class of compounds found in the cannabis plant, possess some hitherto unexplored antibiotic properties.**
- Cannabis has the **potential to make a dent in India’s fight against the escalating threat of antibiotic resistance.**

Thirty Meter Telescope (TMT) project

Context:

- Official delegation from the Department of Science and Technology visits Mauna Kea in Hawaii.
- Focus on addressing challenges to the Thirty Meter Telescope (TMT) project, a global scientific collaboration.

Key Points:

Overview of the TMT Project

- The TMT aims to be a **30-meter optical and infrared telescope for deep space observations.**
- Collaboration involves the U.S., Japan, China, Canada, and India, with Indian participation approved in 2014.
- **India set to contribute hardware worth \$200 million to the project which was approved by Union Cabinet in 2014.**

Local Resistance and Legal Hurdles

- Mauna Kea, housing multiple telescopes, faces opposition from locals on cultural and religious grounds.
- Despite initial construction permits being invalidated by the Supreme Court in 2015, permissions were reinstated in 2018. Construction delays persist due to ongoing local opposition.

Exploration of Alternate Sites and India's Stand

- Discussions are underway to consider the Observatorio del Roque de los Muchachos in Spain as an alternative site for the TMT.
- India, expressing concerns in 2020, emphasized the need for proper procedures and permits. Current Indian perspectives on the project's location remain uncertain.

Future Outlook and Challenges

- Efforts continue to find a consensus and local support for the TMT project.
- Annapurni Subramaniam, the director of the Indian Institute of Astrophysics, anticipates a decision on the project's site within the next two years, highlighting the ongoing challenge of balancing scientific aspirations with community concerns.

Japan launches spy satellite - Optical 8

- Japan has successfully launched an **H2A rocket from the Tanegashima Space Center, carrying the Optical-8 satellite**, a key component of Tokyo's reconnaissance efforts.
- The mission aims to monitor military activities in **North Korea and enhance disaster response capabilities**.

Key Points:

Orbit

- The IGS-Optical 8 satellite is anticipated to enter a circular orbit at an altitude of around **500 kilometers. This orbit will be specifically Sun-synchronous (SSO).**

Purpose of the Mission

- The primary objectives of the mission include observing movements at military sites in North Korea and improving Japan's responses to natural disasters.
- The Optical-8 satellite, equipped with optical capabilities, plays a crucial role in capturing detailed images for intelligence-gathering purposes.

Japan's Satellite Program

- Initiated in response to a North Korean missile incident in **1998**, Japan's satellite program aims to establish a network of 10 satellites.

These satellites, including those equipped with radars for night and severe weather operations, are designed to detect and **provide early warnings for potential missile launches**.

ISRO upgrades its distress alert device for fishermen

- The **Indian Space Research Organisation (ISRO)** has developed an improvised distress alert transmitter (DAT) with advanced capabilities for fishermen at sea to send emergency messages from boats.
- The **DAT-SG has the facility to send back acknowledgement to the fishermen** who activate the distress alert from sea.

- The **information about potential fishing zones** are also transmitted to fishermen using DAT-SG on regular intervals.

Mpemba effect

- The Mpemba effect is the name given to the **observation that a liquid (typically water) which is initially hot can freeze faster than the same liquid which begins cold, under otherwise similar conditions.**
- There is disagreement about its theoretical basis and the parameters required to produce the effect.
- The Mpemba effect is named after Tanzanian scientist Erasto Bartholomeo Mpemba, who described it in 1963 as a secondary school student.

NASA-ISRO Synthetic Aperture Radar (NISAR) Mission

The **NASA-ISRO Synthetic Aperture Radar (NISAR) Mission**, designed to observe natural processes and changes in earth's complex ecosystems, is on track for an **"early 2024" launch**.

About

- NISAR is a **Low Earth Orbit (LEO) observatory jointly developed by NASA and ISRO.**
- It is an **SUV-size satellite weighing 2,800 kilograms.**
- It consists of both L-band and S-band synthetic aperture radar (SAR) instruments, which makes it a dual-frequency imaging radar satellite.
- NISAR will be the first satellite mission to use two different radar frequencies (L-band and S-band) to measure changes in our planet's surface.
- SAR is capable of penetrating clouds and can collect data day and night regardless of the weather conditions.
- NASA has provided the **L-band radar, GPS, a high-capacity solid-state recorder** to store data, and a payload data subsystem. ISRO has provided the S-band radar, the GSLV launch system, and spacecraft.
- It also consists of a **large 39-foot stationary antenna reflector made of a gold-plated wire mesh which will be used to focus "the radar signals emitted and received by the upward-facing feed on the instrument structure.**

- It will measure **Earth's changing ecosystems, dynamic surfaces, and ice masses, providing information about biomass, natural hazards, sea level rise, and groundwater.**
- NISAR will observe **Earth's land and ice-covered surfaces globally with 12-day regularity on ascending and descending passes.**

Cannabis compound that has antibiotic effects

- Scientists at **CSIR-Indian Institute of Integrative Medicine (IIM), Jammu**, have found that phytocannabinoids, a class of compounds found in the cannabis plant, possess some hitherto unexplored antibiotic properties.
- Cannabis has the potential to make a dent in India's fight against the escalating threat of antibiotic resistance.
- **Antimicrobial resistance (AMR) is a major health concern worldwide.** It refers to when bacteria, viruses, fungi, and parasites no longer respond to medicines used to treat them.
- Reports have also flagged the overuse of antibiotics in India, their misuse in animal husbandry, and poor waste disposal for engendering AMR and potentially rendering India the **"AMR capital of the world"**.

Award News

Best sustainable developer award

- **DLF Cyber City Developers Limited** was declared the best sustainable developer at the fourth edition of the **PropertyGuru Asia Property Awards (India)** in Bangkok recently.
- The company also earned special recognition for sustainable design and construction during the award ceremony.
- **Supreme Universal** received the recognition for luxury development while **Turner House by Raiaskaran** won the special recognition for "landmark office design".

Nritya Kalanidhi award

- Classical dancer and choreographer **Vasanthakshmi Narasimhachari** was presented with the 'Nritya Kalanidhi' award at the **17th Dance Festival of the Music Academy**
- The festival stands as a testament to the Academy's commitment to musical education and cultural preservation.

Golden Globes Award

- **Oppenheimer**, Christopher Nolan's drama about the inventor of the atomic bomb, topped the Golden Globes
- Oppenheimer took five prizes including best drama, best director for Nolan, best score, as well as acting trophies for **Cillian Murphy and Robert Downey Jr.**

Swachh Survekshan Awards 2023

- **As per Central Government's annual cleanliness survey, Indore and Surat were adjudged the 'cleanest cities' in the country**
- **Navi Mumbai** retained the **third position**.
- In the category of 'best performing States' in 'Swachh Survekshan Awards 2023', **Maharashtra bagged the top rank, followed by Madhya Pradesh and Chhattisgarh.**

Swachh Survekshan Awards 2023

- The President Droupadi Murmu conferred Swachh Survekshan awards 2023 at Bharat Mandapam, New Delhi hosted by Ministry of Housing and Urban Affairs (MoHUA).
- The theme for the year 2023 was -"**Waste to Wealth**".
- For 2024, the theme is "**Reduce, Reuse and Recycle**".

Key Points:

- **Surat**, a prominent port city, claimed the top honors in cleanliness, sharing the spotlight with Indore. **Indore** had held the solo position for six consecutive years.

About:

- Swachh Survekshan, conducted by **MoHUA since 2016**, is the world's largest urban sanitation and cleanliness survey.
- It has been instrumental in fostering a spirit of healthy competition among towns and cities to improve their service delivery to citizens and towards creating cleaner cities.

- The primary goal of Swachh Survekshan is to encourage large scale citizen participation and create awareness amongst all sections of society about the importance of working together towards making towns and cities better places to reside in.
- Conducted under the ambit of the **Swachh Bharat Mission (Urban)**, the annual survey has managed to mobilise people, resources and authorities in an effort to prove that their city, of all cities in India, is the cleanest and that sustainable practices, both by citizens and ULBs, are being encouraged and promulgated.

Pradhan Mantri Rashtriya Bal Puraskar

- A total of 19 children were given the national children's awards for the year 2024 by the President.
- The '**Pradhan Mantri Rashtriya Bal Puraskar**' was given to nine boys and 10 girls in six categories, namely **art and culture, bravery, innovation, science and technology, social service and sports.**

About

- The Central government confers the Pradhan Mantri Rashtriya Bal Puraskar (PMRBP) to children for their exceptional achievements.
 - The awards are conferred upon the children in the **age group of 5-18.**
- | Name | State | Category |
|----------------------------|-----------------|-----------------------|
| Aaditya Vijay Bramhane | Maharashtra | (posthumous)- Bravery |
| Anushka Pathak | Uttar Pradesh | Art & Culture |
| Arijeet Banerjee | West Bengal | Art & Culture |
| Armaan Ubhrani | Chhattisgarh | Art & Culture |
| Hetvi Kantibhai Khimsuriya | Gujarat | Art & Culture |
| Ishfaq Hamid | Jammu & Kashmir | Art & Culture |
| Md Hussain | Bihar | Art & Culture |
| Pendyala Laxmi Priya | Telangana | Art & Culture |
| Suhani Chauhan | Delhi | Innovation |
| Aryan Singh | Rajasthan | Science & Technology |
| Avnish Tiwari | Madhya Pradesh | Social Service |
| Garima | Haryana | Social Service |
| Jyotsna Aktar | Tripura | Social Service |
| Saiyam Mazumder | Assam | Social Service |
| Aaditya Yadav | Uttar Pradesh | Sports |
| Charvi A | Karnataka | Sports |

- Jesicca Neyi Saring - Arunachal Pradesh - Sports
- Linthoi Chanambam - Manipur - Sports
- R Surya Prasad - Andhra Pradesh - Sports

Film set in India nominated for best documentary in oscars.

- "**To Kill a Tiger**", set in a small Indian village, was nominated for the **Best Documentary feature at the 2024 Academy Awards.**
- A Canadian production, To Kill a Tiger, is directed by Delhi-born Nisha Pahuja, an **Emmy-nominated filmmaker based in Toronto.**
- It had its world premiere at Toronto International Film Festival 2022 where it won the Amplify Voices Award for Best Canadian Feature Film.
- The film follows Ranjit's battle to find justice for his 13-year-old daughter who was abducted and sexually assaulted by three men.

Sports News

Khelo India Youth Games

The Prime Minister will be the Chief Guest for the opening ceremony of the **6th Khelo India Youth Games 2023** which will be held at the Jawaharlal Nehru Stadium in Chennai.

Key Points:

- Khelo India Youth Games (KIYG) are the **annual national level multidisciplinary grassroot games** in India held in January or February for two categories, namely under-17 years school students and under-21 college students.
- Every year **best 1,000 kids will be given an annual scholarship of ₹5 lakh** for 8 years to prepare them for the international sporting events.

About:

- This is the first time that **Khelo India Youth Games are being held in South India.**
- The Games will be played across four cities of Tamil Nadu, namely Chennai, Madurai, Trichy and Coimbatore from 19th to 31st January, 2024.
- The mascot for the games is **Veera Mangai.**

- **Rani Velu Nachiyar**, fondly called as Veera Mangai, was an Indian queen who waged a war against British colonial rule.
- The mascot **symbolises the valour and spirit of Indian women**, embodying the strength of women power.
- The logo for the games incorporates the figure of poet **Thiruvalluvar**.
- Over 5600 athletes will be participating in this edition of Khelo India Youth Games, spread across 13 days in 15 venues with **26 sporting disciplines, over 275 competitive events and 1 demo sport**.
- The 26 sporting disciplines is a diverse mix of conventional sports such as Football, Volleyball, Badminton etc. and traditional sports such as Kalaripayattu, Gatka, Thang ta, Kabaddi and Yogasana.
- **Silambam, a traditional sport of Tamil Nadu**, is being introduced as a demo sport for the first time in the history of Khelo India Youth Games.

Defence News

Agnipath scheme could mean the end of Nepalese Gurkhas in Indian Army

- The **Agnipath scheme, introduced by the Indian government in 2022**, has sparked concerns about its potential impact on the long-standing tradition of **Nepalese Gurkhas serving in the Indian Army**.

About:

- **Introduced in June 2022, it's a new recruitment policy for the Indian Armed Forces.**
- Recruits soldiers for a short-term period of four years, with only **25% retained for longer service**.

Akash missile

The Defence Research and Development Organisation (DRDO) conducted a successful flight test of the new generation **Akash surface-to-air missile (SAM)** from the Integrated Test Range (ITR), Chandipur, off the coast of Odisha.

About

- Akash is **India's first indigenously produced medium range SAM** that can engage multiple targets from multiple directions and it can be launched from mobile platforms like battle tanks or wheeled trucks.
- It has nearly 90% kill probability.

- The development of the Akash SAM was started by the DRDO in the late 1980s as part of the Integrated Guided Missile Development Programme.
- It is unique in the way that It can simultaneously engage multiple targets in group mode or autonomous mode.
- It has built-in **Electronic Counter-Counter Measures (ECCM)** features, which means that it has mechanisms on-board that can counter the electronic systems that deceive the detection systems.
- The missile is supported by the **indigenously developed radar called 'Rajendra'**.

Defence Minister inaugurates 35 projects in border areas

- Defence Minister Rajnath Singh **inaugurates 29 bridges six roads** constructed by the Border Roads Organisation
- The event was organised on the **Dhak Bridge, a 93-metre-long bridge over Dhak Nallah**
- Eleven of the projects are in Jammu and Kashmir, nine in Ladakh, eight in Arunachal Pradesh, three in Uttarakhand, two in Sikkim and one each in Mizoram and Himachal Pradesh.

Border Roads Organisation (BRO)

- It is a **statutory body under the ownership of the Ministry of Defence** of the Government of India.
- BRO **develops and maintains road networks** in India's border areas and friendly neighboring countries.
- This includes infrastructure operations in 19 states and three union territories (including Andaman and Nicobar Islands) and neighboring countries such as Afghanistan, Bhutan, Myanmar, Tajikistan and Sri Lanka.

India-France defence ties

Context:

India-France Defence Industrial Roadmap and Cooperation:

- India and France announce a **"defence industrial road map"** for collaboration in defence production.
- Emphasis on future cooperation in **"co-design and co-development"** of military hardware.

Key Agreements and Talks:

- Prime Minister Narendra Modi and French President Emmanuel Macron sealed several agreements during talks in Jaipur.
- The agreements aim to bring parity with the **India-U.S. defence production plan finalized last year.**

Defence-Space Partnership:

- A new agreement for a defence-space partnership was signed, focusing on collaboration in **"space situational awareness."**
- Memorandum of Understanding (MoU) on coordinating satellite launches to enhance space cooperation.

Diverse Collaborations:

- Additional agreements signed on partnerships in energy, digital health, agriculture, and education.
- No significant progress announced on big-ticket government-to-government deals for fighter jets, engines, and submarines.
- **Airbus-TATA Joint Venture:**
 - Despite no progress on major defence deals, a joint venture for local manufacture of civilian helicopters agreed between Airbus and TATA.

Important Days

National Human Trafficking Awareness Day

- **National Human Trafficking Awareness Day is observed annually on January 11th**
- In 2007, National Human Trafficking Awareness Day was declared by the United States Senate to be celebrated on January 11
- It aims to raise awareness about the horrific crime of human trafficking and the millions of people impacted by it worldwide.
- This day serves as a crucial reminder to stay vigilant, educate ourselves, and take action to combat this modern-day slavery.

About:

- Human trafficking is the illegal trade of people for various purposes, including forced labor, sexual exploitation, organ harvesting, and domestic servitude.

Did you Know?

Blue is internationally recognized as the universal color for human trafficking prevention.

Misc. News

ST status for Hatties

President Droupadi Murmu notified the inclusion of the Hattee community in Himachal Pradesh's Scheduled Tribes list.

About Hattee

- The Hattis are a **close-knit community that got their name from their tradition of selling homegrown vegetables, crops, meat, and wool**, etc. at small markets called 'haat' in towns.
- Hatti men traditionally don a distinctive white headgear on ceremonial occasions.
- The Hatti homeland straddles the Himachal-Uttarakhand border in the basin of the Giri and Tons rivers, both tributaries of the Yamuna.
- **The Tons marks the border between the two states.**
- There are two Hatti clans, in Trans-Giri and Jaunsar Bawar, have similar traditions, and inter-marriages are common.
- The Hattis are governed by a traditional council called **'khumbli'** which, like the **'khaps' of Haryana**, decides community matters.
- The Khumbli's power has remained unchallenged despite the establishment of the Panchayati raj system.
- They have sizeable presence in about nine Assembly seats in the Sirmour and Shimla regions.
- According to the 2011 Census of India, the total **tribal population of Himachal Pradesh is 3,92,126, which is 5.7%** of the total population of the state.

Goldy Brar declared 'individual terrorist'

The Union Home Ministry declared Canada-based Satwinder Singh, alias Goldy Brar, an **"individual terrorist"** under the Unlawful Activities Prevention Act (UAPA).

About UAPA

- The UAPA was enacted in **1967.**
- It **lays down the definitions and rules for designating an organisation as an**

"unlawful association" if it is engaged in certain types of activities.

- The government can then issue a notification designating such an organisation as a terrorist organisation, if it believes that the organisation is part of "terrorist activities."
- Under the Act, 'unlawful activity' is not limited to terror activities relating to causing direct violence or attacks, it also includes any activities that disrupt the sovereignty and territorial integrity of the country, disrupts the economic stability of the country or causes disharmony or feelings of enmity, hatred or ill-will between different religious, racial, language or regional groups or castes or communities in the country
- The **2019 Amendment** gave the Home Ministry the power to designate individuals as terrorists.

Warli Tribe

The Warli tribe in Mumbai objected to the construction of Shivaji Museum on the land they live on.

About

- The **Warli or Varli are an indigenous tribe of western India** there related ethnic groups are Konkani people, Marathi people, living in mountainous as well as coastal areas along the Maharashtra and Gujarat border and surrounding areas.
- **The Warli have their own animistic beliefs, life, customs and traditions, and as a result of acculturation they have adopted many Hindu beliefs.**
- The Warli speak the unwritten Varli language which belongs to the southern zone of the **Indo-Aryan languages.**
- Waralis have sub castes such as **Murde varli, Davar varali.**

Painted Stork (*Mycteria leucocephala*)

- Painted stork is a shorebird.
- **Distribution:** endemic to the Indian subcontinent and Southeast Asia.
- **Habitat:** freshwater marshes, lakes, flooded fields, irrigation canals, rivers, etc.
- **Threats:** Habitat loss, hunting, pollution, invasive species and diseases.
- **Conservation status:** IUCN: NT

Mount Merapi

- Mount Merapi is an **active stratovolcano**

- It is located on the border between the province of Central Java and the **Special Region of Yogyakarta, Indonesia.**
- It is the most active volcano in Indonesia and has erupted regularly since 1548.
- Indonesia, situated on the subduction zone (**the Indo-Australian Plate is subducting under the Eurasian Plate**), part of the Pacific Ring of Fire, experiences frequent volcanic and seismic events.

Kadamba inscription

- An inscription written in Kannada and Sanskrit and said to be of **10th century A.D.** Kadamba period has been discovered in the **Mahadeva temple at Cacoda in southern Goa.**
- The inscription opens with an auspicious saying 'be it well' (**Swasthi Shri**), and records that when Talara Nevayya was administering the mandala, his son Gundayya having taken a vow to fulfil his father's desire of capturing a gopura of the port of Goa, fought and died after fulfilling his father's wish

History behind

- Kadambas of Goa were the subordinates of Chalukyas of Kalyana.
- Chalukya emperor Tailapa II appointed **Kadamba Shasthadeva as mahamandaleshwara of Goa** for his help in overthrowing the Rashtrakutas.
- Kadamba Shasthadeva **conquered the city of Chandavara** from the Shilaharas in 960 A.D.
- Later, he conquered the port of Gopakapattana (present Goa).

Gundayya, the son of Talara Nevayya, may have participated in this battle, and won the port at the cost of his life.

Geographical Indications (GI) tag.

Recently, 17 products from across six States/Union Territories got the Geographical Indications (GI) tag.

Key points

- A GI tag is a **sign used on products that have a specific geographical origin** and possess qualities or a reputation that are due to that origin.
- Every GI tag recognises a particular region and product and brings it to the public eye.

List of recent 17 GI tags

- **Odisha** - Lanjia Saura paintings, Dongaria Kondh shawl, Khajuri Guda, Dhenkanal Magji, Similipal Kai Chutney, Koraput Kalajeera Rice

- **West Bengal** - Tangail Saree of Bengal, Garad silk sarees, Korial saree, Kalonunia Rice, Sundarban Honey:
- **Gujarat**- Kachchhi Kharek
- **Jammu Kashmir**- Ramban Anardana
- **Arunachal Pradesh**- Adi Kekir (Ginger), Handmade Carpets, Wancho Wooden Craft .

Project Tiger

- **Project Tiger has completed 50 years**

Key Points:

- Project Tiger was launched by the **Central government on April 1 1973** in a bid to promote conservation of the tiger.
- It was first launched at the **Jim Corbett National Park**.
- It was a **centrally Sponsored Scheme** of the **Ministry of Environment, Forests and Climate Change** providing central assistance to the tiger States for tiger conservation in designated tiger reserves.
- It **focuses on the conservation of big cats** and ensures the preservation of their natural habitat as tigers are at the top of the food chain.

Critical Tiger Habitats

- The Critical Tiger Habitats come under the purview of the **Wildlife Protection Act of 1972**.
- These habitats are created by keeping the interests of the Scheduled Tribes in consideration along with those people whose livelihoods depend on the forests.
- **Critical wildlife/tiger habitats (CWH)** are defined by the **Forest Rights Act of 2006 as areas of National Parks and Sanctuaries** that must be protected for wildlife protection.
- After an open consultation process by an Expert Committee, the Central Government's Ministry of Environment and Forests makes the decision and notifies the public.

National Tiger Conservation Authority

- **National Tiger Conservation Authority (NTCA)** is a **statutory body** under the Ministry of Environment, Forests and Climate Change.
- It was **established in 2005** following the recommendations of the Tiger Task Force.
- It was constituted under enabling provisions of the **Wildlife (Protection) Act, 1972**, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it.

Humboldt's enigma in context of India

- **Humboldt's enigma** refers to the **puzzling observation that mountain regions, particularly in the tropics, harbor a disproportionately high level of biodiversity** compared to other, seemingly more suitable habitats like tropical rainforests.

Significance for India:

- **Unique biodiversity hotspots:** The Western Ghats and Sri Lanka harbor exceptional plant and animal species not found elsewhere, making them globally significant biodiversity hotspots.
- **Climate change vulnerability:** Elucidating the factors behind the enigma aids in predicting how plant communities might respond to changing climate patterns, crucial for conservation efforts.

Amazon's Audible laying off 5% of workforce

- **Audible, the online audiobook and podcast service owned by Amazon, is laying off 5% of its workforce, marking the latest round of job cuts** in the tech industry.
- This is the **third round of job cuts at Amazon businesses this week**, following layoffs in streaming and studio divisions.

India's oldest living city

- A joint study by five prominent institutions (**Indian Institute of Technology, Kharagpur, Archaeological Survey of India (ASI), Physical Research Laboratory, Jawaharlal Nehru University, and Deccan College**) was done.
- It has found evidence of a cultural continuity in Vadnagar in present-day Gujarat even after the collapse of the Harappan civilisation, thus making it likely that the **"Dark Age"** was a myth.

Key points

- They found evidence of a human settlement that is as old as **800 BCE contemporary to late-Vedic/pre-Buddhist Mahajanapadas or oligarchic republics**
- The study also indicates that the rise and fall of different kingdoms during the 3,000-year period and recurrent invasions of India by central Asian warriors were driven by severe changes in climate like rainfall or droughts.
- The period between the collapse of the Indus Valley Civilisation and the emergence of the

Iron Age and cities such as Gandhar, Koshal, and Avanti is often depicted as a Dark Age by archaeologists.

- If true, then it suggests a cultural continuity in India for the last 5500 years and the Dark Age may be a myth

Prabha Atre

Legendary classical singer and Padma Vibhushan recipient Prabha Atre passes away.

Key points

- She was born in September 1932 in Pune, Maharashtra
- She has won the **Padma Shri in 1990, the Padma Bhushan in 2002 and the Padma Vibhushan in 2022.**
- She received her training in classical music from Sureshbabu Mane, a prominent exponent of the **Kirana gharana.**
- She was equally proficient in different classical genres, be it khyal, tarana, thumri, dadra, ghazal and bhajan, citing the influence of Ustad Amir Khan (founder of the Indore gharana) for khyal and Bade Ghulam Ali Khan (Kasur gharana) for thumri.

Panama Canal

There is a shortage of water in the Panama Canal due to which the shipping sector is facing a lot of problems.

About

- The Panama Canal is an **82 km artificial waterway** in Panama, connecting the Atlantic and Pacific Oceans and dividing North and South America.
- It allows ships to avoid the lengthy and dangerous voyage around Cape Horn.
- **Panama itself forms an isthmus** (a narrow land strip connecting two larger landmasses) between North and South America.
- This differs from straits, which are narrow waterways joining larger bodies of water, like the Strait of Gibraltar.

Kuno National Park (KNP)

One more cheetah, part of the set of 20 imported from Africa, died recently.

About Kuno National Park (KNP):

- It is located in the **Sheopur district in Madhya Pradesh.**
- It is nestled near the Vindhyan Hills.

- It is named after the **Kuno River (One of the main tributaries of the Chambal River)** that cuts across it.
- Initially established as a wildlife sanctuary, it was only in 2018 that the government changed its status into a national park.
- Kuno National Park was selected under **'Action Plan for Introduction of Cheetah in India'**.
- Vegetation: Kuno is primarily a grassland region, though a few rocky outcrops are found here too.

Flora:

- Kardhai, Salai, and Khair trees dominate the forested area of Kuno National Park, which is mostly mixed forest.
- The park has a total of 123 tree species, 71 shrub species, 32 exotic and climbing species, and 34 bamboo and grass species.
- **Fauna:** The protected area of the forest is home to the jungle cat, Indian leopard, sloth bear, Indian wolf, striped hyena, golden jackal, Bengal fox and dhole, along with more than 120 bird species.

Sisal leaves

Scientists at Stanford University are researching the use of **sisal leaves to create a highly absorbent material** that could replace cotton, wood pulp, and chemical absorbents in sanitary napkins.

Key points

- The absorption capacity of the sisal-based material is reported to be higher than that in commercial menstrual pads.
- The method developed by the researchers involves using a **decorticator to mechanically separate the fibres** from sisal leaves and employing a process inspired by termite guts to delignify the fibres.
- The study claims that the process uses no polluting or toxic chemicals and can be conducted on a small scale, making it environmentally sustainable.

13% of land mass in Kerala vulnerable to landslips

- An artificial intelligence-based map of Kerala has revealed that **13% of the land mass is extremely vulnerable to landslips**, forming part of a multifaceted crisis gripping the region.
- The map shows **Idukki, Palakkad, Malappuram, Pathanamthitta, and Wayanad** as highly vulnerable regions

- Critical factors contributing to landslip vulnerability include first-order stream disturbances, slope toe cutting for road construction, and unscientific land use.
- The vulnerability map, prepared under the aegis of **Kufos, is the first AI-based landslip susceptibility map.**

Warmer winter impacts coldest region of Ladakh

- An unusually warm winter has impacted extreme **winter sports like ice hockey and the 105-km Chadar** trek in the cold desert mountains of Ladakh
- It is **considered the country's coldest place**, where the minimum temperature can drop up to -40 degrees Celsius.
- **Ladakh is the only region where ice formation**, not snow accumulation, is a common phenomenon.
- This helps locals to prepare for national and international events.

Mosquitofish

Various government and non-governmental organizations in Andhra Pradesh, Odisha, and Punjab have released mosquitofish into local water bodies to address a mosquito menace that locals have complained about.

About

- It is also known as **mosquito fish**, and is widely used as a biological agent for controlling mosquito larvae.
- It is native to the waters of the **south-eastern United States.**
- It has been a part of mosquito-control strategies for over a century in various parts of the world, including India.
- A single full grown **fish eats about 100 to 300 mosquito larvae per day.**
- Also it has been part of various malaria control strategies in India since 1928, including the **Urban Malaria Scheme.**
- The International Union for Conservation of Nature declared Gambusia one of the 100 worst invasive alien species in the world.

Architectural details of Ayodhya Temple

- The Temple is built over **three 20-foot high floors each with a total of 392 pillars and 44 doors.**

- **Makrana Marble and Pink sandstone, granite stone, and colored Marble** are used in the construction.
- Foundation of the temple is built of a **14-metre-thick layer of roller-compacted concrete.** And a 21-foot-high granite plinth has been placed to protect against ground moisture.
- Iron has not been used anywhere in the construction.
- The Architectural style of the temple is **Nagara style with Sanctum Sanctorum (garbhagriha), Mandaps (halls), and Mandirs.**
- At each corner of the compound will be dedicated to Surya, Bhagwati, Ganesh, Shiv. On the northern and southern arms, temples to Annapurna and Hanuman will be built respectively.
- Temples of Maharshi Valmiki, Vashishtha, Vishwamitra, Agastya, Nishad Raj, Shabri etc have also been proposed.

Baltic Sea

Russia blames **Kyiv** for attack on gas terminal at Baltic Sea port.

About

- It is part of the **North Atlantic Ocean, situated in Northern Europe.**
- It extends northward from the latitude of southern Denmark almost to the Arctic Circle and separates the Scandinavian Peninsula from the rest of continental Europe.
- The Baltic sea connects to the **Atlantic Ocean through the Danish Straits.**
- It is the largest expanse of brackish water in the world. Its water salinity levels are lower than that of the World Oceans due to the inflow of fresh water from the surrounding land and the sea's shallowness.
- **Surrounding Countries:** Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Russia, Finland and Sweden.

75th Republic Day

- President Smt Droupadi Murmu to lead the **75th Republic Day celebrations in New Delhi on January 26, 2024.**
- French President **Emmanuel Macron** to be the Chief Guest at the parade.

Key Points:

- **Twin themes: 'Viksit Bharat' and 'Bharat - Loktantra ki Matruka'.**

Women Empowerment in Parade:

- Over 100 women artists herald the parade with Indian musical instruments.
- Maiden participation of an all-women Tri-Service contingent.
- Women pilots showcased Nari Shakti during the Fly-past.
- Central Armed Police Forces (CAPF) contingents consisted of only women personnel.

Padma Awards:

- These awards are announced annually on the eve of Republic Day
- 2024 list comprises **5 Padma Vibhushan, 17 Padma Bhushan and 110 Padma Shri Awards.**

PADMA VIBHUSHAN (5)

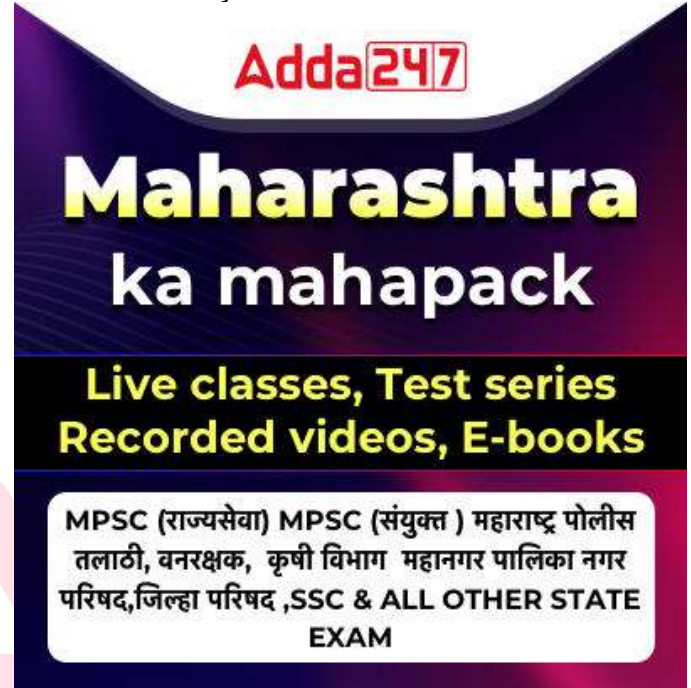
- Ms. Vyjayanthimala Bali - TN (Art)
- Ms. Padma Subramaniam - TN (Art)
- Shri Konidela Chiranjeevi - AP (Art)
- Shri M. Venkaiah Naidu - AP (Public Affairs)
- Shri Bindeshwar Pathak (P) - Bihar (Social Work)

Gallantry Awards:

- President Smt Droupadi Murmu has approved Gallantry awards to 80 Armed Forces personnel, including 12 posthumous, on the eve of 75th Republic Day.
- They include **Param Vir Chakra** winners Subedar Major (Honorary Captain) Yogendra Singh Yadav (Retd) & Subedar Major Sanjay Kumar (Retd), and **Ashok Chakra** winners Major General CA Pithawalla (Retd), Colonel D Sreeram Kumar & Lt Col Jas Ram Singh (Retd).

Do you know?

- The **Param Vir Chakra** is awarded for the most conspicuous act of **bravery and self-sacrifice** in the face of the enemy, while the **Ashok Chakra** is awarded for similar acts of valour and self-sacrifice but, other than, in the face of the enemy.



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