

Factly Weekly

Compilation

2024

**For UPSC CSE Prelims
Exam**

**1st Week
January 2024**

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Subject: Polity and Nation

SC Report Reveals Absence of Women's Toilets in 20% of District Courts Nationwide

Why in the News?

Recent Supreme Court Report '**State of the Judiciary**' highlights the absence of women's restrooms in almost 20% of District Court complexes nationwide.

What are the Key Findings of the Report?

- 1) Citing data from the **National Judicial Data Grid**, it highlighted that almost 20% of district court complexes in the country lack separate toilets for women.
- 2) It emphasized the need for women-friendly toilets, noting that **just 6.7% have sanitary napkin vending machines**.
- 3) It noted that court toilets have broken doors and **inadequate water supply**. It also highlighted the **absence of a designated maintenance service** in some cases.
- 4) It also highlighted **lack of toilets for transgender individuals** in most district courts, underscoring the importance of having "gender-inclusive toilets" in every court complex.

Gangster Goldy Brar Designated as a Terrorist under UAPA

Why in the News?

The Centre has declared Gangster Goldy Brar a designated terrorist under the Unlawful Activities (Prevention) Act (UAPA).

Who is a 'Terrorist'?

The **UAPA doesn't define "terror" or "terrorist," but it defines a "terrorist act"** as any action intended to threaten India's unity, integrity, security, economic security, or sovereignty, or to instill terror in the people domestically or internationally.

The **2019 Amendment to UAPA** allowed the Central Government to designate an individual a "terrorist" if they are found committing, preparing for, promoting, or involved in an act of terror.

How does the Government Declare Individuals as Terrorists?

- 1) The central government can designate an individual as a terrorist by publishing a **notification in the official gazette** and adding their name to the **Fourth Schedule of the UAPA**.
- 2) The government is not required to give an individual an opportunity to be heard before such a designation.

What Happens When an Individual is Declared a Terrorist?

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1) The 2019 Amendment to UAPA **does not provide any details on the consequences associated** on being designated a terrorist.

Note- This is unlike the case of an individual being designated as a global terrorist by the United Nations which comes with sanctions including travel bans, freezing of assets and an embargo against procuring arms.

2) It granted the Centre the **authority to remove a name from the schedule** upon individual application. If the government rejects an application, the individual can seek a review within one month of the rejection.

3) The amendment established a **review committee**, led by a retired or sitting High Court judge and three members. The committee will have the authority to order the removal of an individual's name from the "terrorists" schedule if it deems the government's order flawed.

4) Individuals also have the option to challenge the government's order in court.

Railways tightens RTI norms

Why in the News?

Indian Railways tightens RTI norms for Zonal Railways following Central Railway's disclosure of cost of installation of selfie point in response to an RTI application.

What are the Revised RTI Norms by the Railways?

1) The new norms require the **general manager (GM) of the zone or divisional railway manager (DRM) to approve all RTI responses** for clearance.

2) Similarly, responses to first appeals received under the RTI Act must be presented to the respective GM and DRM.

Note- Under the RTI Act, the GM or DRM has no role as appellate or competent authorities.

3) According to officials, the changes have been brought to check the deterioration in the quality of replies to RTI applications handled by Zonal Railways and other field units.

What are the Selfie Booths set up at Railway Stations?



Source- India Today

1) On 27th September the Railway directed **all 19 zonal railways** and general managers to promptly install selfie booths at various stations.

2) These booths feature durable **3D fibre sculptures**, acrylic boards, glass, and integrated lighting.

- 3) The installations **showcase central government initiatives** like Skill India, Ujjwala Yojana, and Chandrayaan Mission, among others.
- 4) Central Railways RTI response revealed a permanent selfie booth featuring PM Narendra Modi **costs Rs. 6.25 lakh**, and each temporary booth **costs Rs. 1.25 lakh**, sparking political controversy.

Subject: International Relations

India and Pak. exchange list of nuclear installations

Why in the News?

India and Pakistan recently **exchanged lists of nuclear installations** under a bilateral pact that prohibits attacks on each other's atomic facilities. Additionally, both countries exchanged lists of civilian prisoners and fishermen in each other's custody.

What is the Agreement between India and Pakistan?

- 1) On **December 31, 1988**, India and Pakistan signed an agreement that **prohibits either country to attack nuclear installations and facilities of the other**.
- 2) The agreement came into force on January 27, 1991 and the first exchange of such a list took place on January 1, 1992.
Note- This marks the **33rd consecutive exchange** of these lists between the two countries.
- 3) On January 1 of every calendar year, both nations are required to **notify each other about their respective nuclear facilities** to be covered under the agreement.
- 4) **Coverage-** The term "nuclear installations and facilities" encompasses nuclear power and research reactors, fuel fabrication, uranium enrichment, isotopes separation, reprocessing facilities, and **any establishments storing substantial quantities of radioactive materials**, including those with fresh or irradiated nuclear fuel and materials in any form.

Free Movement Regime to end at Myanmar border

Why in the News?

The Union government is poised to terminate the Free Movement Regime (FMR) along the Myanmar border.

What is Free Movement Regime (FMR) with Myanmar?

- 1) The FMR is a mutually agreed arrangement between the two countries that allows tribes living along the border on either side **to travel up to 16 km inside the other country without a visa**.
- 2) They can cross the border on production of a border pass, usually valid for a year, and can stay for up to two weeks per visit.
- 3) The FMR is a reflection of the strong **ethnic and familial ties** across the border.
- 4) It was **implemented in 2018** as part of the India's Act East policy.

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5) **India suspended the FMR in September 2022** following the 2021 Myanmar coup and the resultant migrant influx. Over 40,000 refugees took shelter in Mizoram, and around 4,000 refugees are said to have entered Manipur.

Note- The persecution of **Kuki-Chin-Zo ethnic groups** by the ruling junta in Myanmar has pushed them towards India through the unfenced, porous borders.

About India-Myanmar Border



Source- Indian Defence Review

- 1) India shares a **1,643 km-long border** with Myanmar.
- 2) It passes through the States of **Arunachal Pradesh** (520 km), **Nagaland** (215 km), **Manipur** (398 km), and **Mizoram** (510 km).
- 3) The border remains largely unfenced and is protected by **Assam Rifles**.

UN's Genocide Convention: South Africa files genocide case against Israel at ICJ

Why in news?

Recently, South Africa approached the International Court of Justice (ICJ) to seek an immediate order affirming that Israel had violated its commitments under the **1948 Genocide Convention**.

What is the UN Convention on the Prevention and Punishment of the Crime of Genocide?

- 1) The Convention is an instrument of international law that codified the crime of genocide for the first time.
- 2) It was the first human rights treaty adopted by the General Assembly of the United Nations on 9 December 1948.
- 3) According to the Genocide Convention, genocide is a crime that can take place both in time of war and in time of peace.

Definition of Genocide: In the present Convention, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:

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- a. Killing members of the group.
- b. Causing serious bodily or mental harm to members of the group.
- c. Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part
- d. Imposing measures intended to prevent births within the group.
- e. Forcibly transferring children of the group to another group.

5) The convention also states that any country involved in the agreement can request the relevant United Nations organs to take necessary actions to prevent and suppress acts of genocide.

6) It puts obligation on state parties to take measures to prevent and to punish the crime of genocide, including by enacting relevant legislation and punishing perpetrators.

What is the International Court of Justice?

1) The International Court of Justice (ICJ) is the **principal judicial organ of the United Nations (UN)**.

2) It was established in **June 1945** by the **Charter of the United Nations** and began work in **April 1946**.

Role: To settle legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.

Seat: of the Court is at the **Peace Palace in The Hague (Netherlands)**.

Composition: **15 judges**, who are elected for terms of office of nine years by the United Nations General Assembly and the Security Council.

Of the six principal organs of the United Nations, it is the **only one not located in New York (United States of America)**.

Its official languages are **English and French**.

Subject: Indian Economy

Domestic Systemically Important Banks (D-SIBs) for 2023

Why in news?

Recently, the Reserve Bank of India (RBI) issued the list of Domestic Systemically Important Banks (D-SIBs).

Which banks are on the list of Domestic Systemically Important Banks (D-SIBs)?

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Bucket	Banks	Additional Common Equity Tier 1 requirement as a percentage of Risk Weighted Assets (RWAs)
5	-	1%
4	State Bank of India*	0.80%
3	-	0.60%
2	HDFC Bank*	0.40%
1	ICICI Bank	0.20%

Source- RBI

- 1) The RBI has retained the **State Bank of India, HDFC Bank and ICICI Bank** as Domestic Systemically Important Banks (D-SIBs).
- 2) **SBI has been shifted from bucket 3 to bucket 4**, and **HDFC Bank from bucket 1 to bucket 2**. ICICI Bank continues to maintain its previous categorization of bucket 1.
- 3) The higher D-SIB surcharge for SBI and HDFC Bank will be applicable from **April 1, 2025**. The **additional Common Equity Tier 1 (CET1) requirement** will be in addition to the capital conservation buffer.

What are the Domestic Systemically Important Banks (D-SIBs)?

- 1) D-SIB are banks whose **potential failure might seriously disrupt the financial system** due to the bank's size, cross-jurisdictional activities, complexity, lack of substitutability and interconnectedness.
- 2) Systemically Important Banks (SIBs) are hence considered '**Too Big to Fail (TBTF)**'.
- 3) The **framework for handling Domestic Systemically Important Banks (D-SIBs)** was published by RBI in **2014** and was effective from 2015.
- 4) **RBI places these banks in appropriate buckets** depending upon their Systemic Importance Scores (SISs). Based on the bucket in which a D-SIB is placed, an **additional common equity requirement** has to be applied to it.
- 5) In case a foreign bank having a branch presence in India is a **Global Systemically Important Bank (G-SIB)**, it has to maintain additional **CET1 capital surcharge** in India as applicable to it as a G-SIB, proportionate to its **Risk Weighted Assets (RWAs)** in India.

RBI's Revised Guidelines for Customers with Inoperative and Unclaimed Accounts

Why in the News?

The Reserve Bank of India (RBI) has revised guidelines for classifying accounts and deposits as inoperative accounts and unclaimed deposits by banks.

What are the Revised Guidelines?

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- 1) **Annual review**– The RBI has instructed banks to conduct an annual review for accounts with no customer-initiated transactions for over a year.
- 2) **Alert messages**- Banks should notify account holders via letters, email, or SMS if there has been no activity in their accounts in the past year. The message should mention that the account would become ‘inoperative’ if no operations are carried out during the next one year
- 3) **Account which can be classified as inoperative**- To classify an account as inoperative, only transactions initiated by the customer will be taken into account, excluding those initiated by the bank.
Note- Bank-induced transactions are transactions in the account initiated by the bank such as charges, fees, interest payments, penalties and taxes.
- 4) **Accounts cannot be classified as inoperative accounts**– The stipulation of ‘inoperative’ accounts is not applicable on zero balance accounts for beneficiaries of Central/State government schemes and for students who receive scholarships.
- 5) The classification of an account as inoperative will only be for a particular account of the customer and not with reference to the customer.
- 6) **Inoperative accounts reactivation**- The RBI has instructed banks to **offer KYC updation** for activating inoperative accounts and unclaimed deposits **at all branches**, including non-home branches. **No charges should be levied** for activation of inoperative accounts.
- 7) Banks **cannot impose penalties for not maintaining minimum balances** in accounts classified as inoperative.
- 8) **Interest on savings accounts should be regularly credited**, regardless of the account’s operational status.

What are Inoperative Accounts and Unclaimed Deposits?

- 1) A savings or current account is treated as inoperative, if there are no ‘**customer induced transactions**’ in the account for a **period of over two years**.
- 2) Unclaimed deposits on the other hand are those savings/ current accounts with **no activity for 10 years** or term deposits unclaimed for a decade after maturity

Green Cover Index – NHAI signs MoU with NRSC

Why in the News?

NHAI has signed a three-year MoU with the National Remote Sensing Centre to develop and report a “Green Cover Index” for India’s National Highways.

What is the aim of ‘Green Cover Index’ project?

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1) Aim: to capture the **Green Cover Index region-wise for National Highways** in the initial assessment cycle, with subsequent annual cycles focusing on estimating growth patterns using scientific techniques.

2) Agencies involved: NRSC in collaboration with NHAI will conduct a nationwide assessment for National Highways.

3) Technology: It will be done with the help of high-resolution satellite imagery.

4) Feature: It will provide an estimate of green cover for every 1 km length.

Note- As a demonstration of its capabilities, NRSC has already executed successful pilot projects to estimate green cover along National Highways.

What are the Significances of the project?

1) It will provide an efficient and cost-effective solution for generating a macro-level estimate of greenery along National Highways.

2) It will enable focused interventions in areas identified as lacking sufficient green cover.

What is the National Remote Sensing Centre(NSRC)?

1) NRSC is one of the primary **centers of the Indian Space Research Organization (ISRO)**, Department of Space (DOS).

2) **Headquarter** – Hyderabad

3) Mandate: To set up ground stations for **satellite data reception**, produce data products, and **develop techniques for remote sensing applications**, including geospatial services contributing to good governance.

RBI clarifies Framework for acceptance of Green Deposits

Why in the News?

Recently, the RBI released updated guidelines to clarify key provisions related to the RBI's Green Deposits Framework.

What are Green Deposits?

1) Green deposits are similar to regular bank deposits, with the key distinction being that banks commit to **allocating the funds from these deposits to support environmentally friendly initiatives**.

2) For instance, a bank might specify that green deposits will be directed towards financing projects such as renewable energy initiatives to combat climate change.

What are the updated RBI guidelines for the acceptance of Green Deposits within the framework?

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- 1) RBI clarified that it is not mandatory for the financial institutions such as banks and non-banking financial corporations (NBFCs) to raise green deposits.
- 2) Green deposits can be **invested in short-term liquid instruments**, limited to a one-year maturity. However, this restriction applies until the funds are allocated to green activities or projects.
- 3) The framework applies to green deposits raised by banks from June 1, 2023, onward. Banks **cannot secure green deposits after financing green activities/ projects**.
- 4) Banks **must pay interest on green deposits, with no restriction on premature withdrawal**, subject to guidelines. Early withdrawal does not impact activities funded by green deposits, and there is no penalty for non-allocation to green projects.
- 5) **Banks can provide overdraft facilities** against green deposits, following guidelines outlined in the RBI circular dated April 19, 2022.
- 6) The framework permits green deposits to be **denominated in Indian Rupees only**.
- 7) Deposits obtained within this framework fall under the protection of the **Deposit Insurance and Credit Guarantee Corporation**.
- 8) Given that the activities specified in the green deposits framework align with those outlined in sovereign green bonds, **investments in sovereign green bonds are consequently included within the framework**.

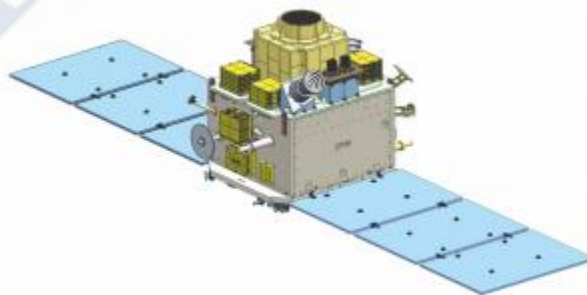
Subject: Science & Technology

XPoSat Mission launched by ISRO

Why in the News?

The Indian Space Research Organisation (ISRO) has successfully launched the **PSLV-C58 X-ray Polarimeter Satellite (XPoSat) mission** on **January 1, 2024**.

What is XPoSat Mission?



Source- Wikipedia

Specifications	Details
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What is it?	XPoSat is ISRO's inaugural scientific satellite solely dedicated to space-based polarization measurements of X-ray emissions from celestial sources.
Launched on	1 January 2024
Rocket	PSLV-C58
Payloads	1) POLIX (Polarimeter Instrument in X-rays)- it will measure the polarimetry parameters (degree and angle of polarization) in medium X-ray energy range of 8-30 keV photons of astronomical origin. 2) XSPECT (X-ray Spectroscopy and Timing)- it will give spectroscopic information and observe several types of sources such as X-ray pulsars, blackhole binaries, low-magnetic field neutron star etc.
Significance	1) It is India's first and the world's second polarimetry mission , after NASA's Imaging X-ray Polarimetry Explorer (IXPE). 2) XPoSat will become India's third space-based observatory after the recently launched solar mission Aditya-L1 and AstroSat launched in 2015.

What are the other 10 Payloads onboard PSLV C58 Rocket?

- 1) ISRO has utilized the **PSLV Orbital Experimental Module (POEM)** platform for the **third time** to achieve the objectives of 10 other payloads.
- 2) Under this, after injecting XPoSat in its orbit, the **fourth stage of the launch vehicle** was fired twice to bring it down to 350-km orbit where it will be **used as a platform for experiments.**
- 3) Among these 10 payloads the **Fuel cell Power System (FCPS) payload** (designed by ISRO's Vikram Sarabhai Space Centre) is significant as it has **potential applications in India's space station** which is proposed to come up by 2035.
- 4) POEM's experiments include the **Women Engineered Satellite (WESAT)** by LBS Institute of Technology for Women, which examines solar irradiance and UV index.
- 5) Additional experiments cover radiation shielding, amateur radio, three propulsion systems by space start-ups, an inter-planetary dust count experiment by Physical Research Laboratory, and a **silicon-based high-energy cell** by VSSC.

Chamelion Trojan Malware

Why in news?

Cyber security researchers have identified a powerful variant of the notorious '**Chameleon Trojan malware**', presenting a significant threat to users of Android devices.

What is Chameleon Trojan Malware?

- 1) The **Chameleon malware** is a **Trojan program** capable of infiltrating devices with minimal detection, disabling biometric authentication features such as fingerprint security and face unlock.
- 2) Chameleon Trojan can also evade detection by malware scanning apps.

How does it operate?

- 1) Cameleon Trojan **attaches itself to legitimate Android apps** like Google Chrome to avoid detection and runs the code in the background.
- 2) Cameleon Trojan bundles are **undetectable in runtime**, allowing it to bypass Google Protect alerts and security software running on the device.
- 3) It adapts its tactics depending on the targeted Android version. On Android 12 and earlier versions, it **exploits the Accessibility service**, while in more recent versions, it **utilizes a deceptive HTML page** to circumvent security restrictions imposed by Google.
Note- An Accessibility Service **assists users with disabilities or users of assistive technologies** in using Android devices and apps.
- 4) It also steals on-screen content, giving itself more permissions and can **capture any PINs and passwords** users enter to unlock the device.
- 5) Chameleon Trojan then uses the stolen PIN to unlock the device in the background and **steal more sensitive information like credit card passwords, login credentials** and more.
- 6) Malware also **collects information on app usage habits** to determine when the user is using their device and launch attacks when they are least likely to use it.

CO2 levels to identify habitability of planets

Why in the News?

A recent study by a team of researchers suggests that lower levels of CO₂ in a planet's atmosphere may indicate the **presence of liquid water**, rendering the planet 'habitable.'

What are the Findings of the study?

- 1) The researchers have devised a **new 'habitability signature'** as a "practical method for detecting habitability" of a planet.
- 2) According to the researches, **lower levels of CO₂ in a planet's atmosphere** compared to neighbouring planets **suggests potential absorption by an ocean** or isolation by biomass on a planetary scale.
- 3) Planets positioned at an ideal distance from their star— neither too close leading to excessive heat nor too far resulting in extreme cold— are deemed to be in the habitable zone and may be capable of hosting water on their surface.

What is the Significance of the Study?

- 1) The habitability signature can help us **identify planets with oceans**, increasing the likelihood of their ability to support life.
- 2) Studying CO₂ levels of other planets may also **offer insights into Earth's environmental tipping points** and the associated carbon levels at these points that could render our planet uninhabitable.
– For example **Venus and Earth** share similarities, but Venus' high carbon levels suggest a past climatic tipping point that may have rendered it uninhabitable.

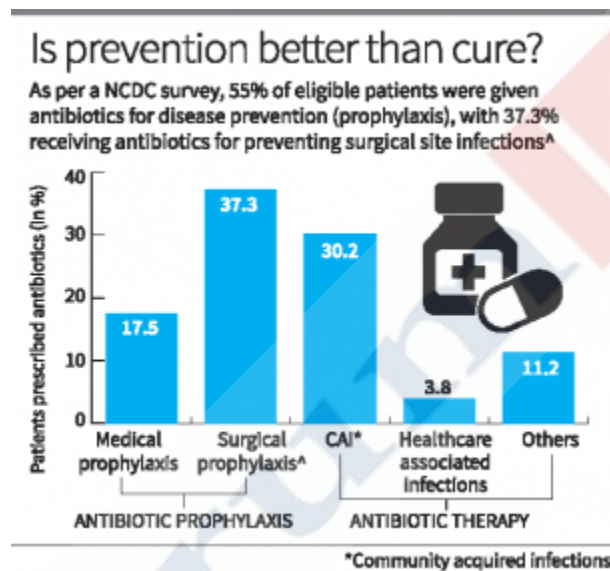
3) The team suggested that the 'habitability signature' they developed could **also function as a biosignature**, considering that living organisms also capture carbon dioxide.

NCDC survey: 55% of patients given antibiotics only as a preventive measure

Why in the News?

The Ministry of Health released results of survey conducted by the National Centre for Disease Control (NCDC), mapping patients for antibiotic usages across 15 States and two Union Territories.

What are the Results of the Survey?



Source- The Hindu

1) The survey reveals that 94% of patients were prescribed antibiotics before receiving a definitive diagnosis of the infection, with **only 6% receiving antibiotics after a confirmed diagnosis**.

2) Only 45% for therapeutic indications, while the remaining **55% of patients were prescribed antibiotics for preventive indications**.

3) The report also identified **significant variations among hospitals, with antibiotic prescriptions ranging from 37% to 100%** across different institutes.

4) Applying the **WHO's Access, Watch, and Reserve (AWaRe) classification**, a substantial 57% of the prescriptions were for antibiotics in the Watch group, designated for specific, limited infective syndromes and more susceptible to antibiotic resistance.

5) The report highlights that a major factor **contributing to antimicrobial resistance (AMR)** is the excessive and inappropriate use of antibiotics.

Note- The WHO recognizes antimicrobial resistance (AMR) as a **major threat to public health**.

What is NCDC?

1) It was established in 1963 under Ministry of Health to function as a **national centre of excellence for control of communicable diseases**.

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- 2) It serves as the **nodal agency for India's national program on AMR containment**.
- 3) To attain AMR monitoring, it set up the **National Antibiotic Consumption Network (NAC-NET)**, where network sites collect and forward data on antibiotic consumption in their health facilities to the NCDC.

Cyber Kidnapping

Why in News?

A Chinese student who was a victim of 'cyber kidnapping' has been found in rural Utah, unharmed.

What is Cyber Kidnapping?

- 1) Cyber kidnapping refers to a crime where the 'kidnappers' convince their victim to hide, and then contact their loved ones for ransom.
- 2) The victim is also made to send pictures that make it look like they are being held captive showing them bound or gagged which are then shared with the family.
- 3) The 'kidnappers', though not physically present, monitor the victim online through video-call platforms.
- 4) Unlike traditional abductions, virtual kidnappers have not actually kidnapped anyone. Instead, through deceptions and threats, they coerce victims to pay a quick ransom.
- 5) Experts believe that with the rise of Artificial Intelligence (AI), such crimes can rise, as scammers can send people voice notes that sound exactly like a loved one in distress.

How to Protect Oneself?

- 1) Experts recommend being extra careful with calls from unknown numbers as cyber criminals can also make it appear like they are calling from a loved one's number.
- 2) Experts also recommend checking up on loved ones before making payments, and to approach the police.
- 3) Use multi-factor authentication security apps to ensure that your sensitive information stays safe.

Kochi-Lakshadweep Islands Submarine Optical Fiber Connection

Why in the News?

PM Narendra Modi inaugurated the Kochi-Lakshadweep Islands Submarine Optical Fiber Connection (KLI-SOFC) project in Kavaratti, Lakshadweep.

What is Kochi-Lakshadweep Islands Submarine Optical Fiber Connection (KLI-SOFC) project?



Source- PIB

Specifications	Details
What is it?	1) The KLI project extended submarine cable connectivity from Kochi to eleven Lakshadweep Islands , including Kavaratti, Agatti, Minicoy etc. 2) Previously, communication with the Islands relied solely on satellite, with limited bandwidth capacity unable to meet the growing demand. 3) Population of Lakshadweep Islands will be provided high speed wireline broadband connectivity through FTTH and 5G/4G Mobile network .
Funded by	Universal Services Obligation Fund (USOF) , Department of Telecommunication
Total link distance	1,868 kms
Implementing Agencies	1) BSNL, as the Project Executing Agency 2) M/s NEC Corporation India Pvt Ltd received the contract for work.
Major activities related to the project	Marine Route Survey, Submarine Cable laying, Civil Construction of CLS stations, Installation, Testing and Commissioning of End Terminals (SLTE).

What are the benefits of the Project?

- 1) It will contribute significantly to the ‘**Digital India**’ and ‘**National Broadband Mission**’ objectives, facilitating the implementation of various e-governance projects in the Lakshadweep Islands by the Government of India.
- 2) It will help in boosting E-Governance, Tourism, Education, Health, Commerce, and Industries in the region, which may lead to enhanced standards of living and accelerated social and economic development on the island.
- 3) The **bandwidth** created under this project will be **available to all Telecom Service Providers (TSPs)** to strengthen their telecom services in the Lakshadweep Islands.

Zosurabalpin: New antibiotic identified to target a drug-resistant bacterium

Why in news?

Researchers have identified a new class of antibiotics called 'Zosurabalpin' with the potential to tackle a drug-resistant bacterium, *Acinetobacter baumannii*.

What is Zosurabalpin?

- 1) Zosurabalpin is an **antibody** that is effective **against CRAB (carbapenem-resistant *Acinetobacter baumannii*)-induced pneumonia and sepsis in mouse models.**
- 2) Scientists identified a **tethered macrocyclic peptide (MCP)** that selectively kills *A. baumannii* which was **further optimised** for efficacy and tolerability, resulting in zosurabalpin.
- 3) The antibiotic kills *A. baumannii* through a previously unknown mode of action. It **inhibits the transport of the molecule lipopolysaccharide (LPS)** by inhibiting a complex of proteins.
- 4) This complex was essential for transporting LPS to the bacterial surface to create the outer-membrane structure of Gram-negative bacteria. However, the blocking of the LPS transport **results in an abnormal build-up of LPS in the cell which kills the bacterium.**
- 5) The antibiotic demonstrated efficacy against over 100 clinically tested samples of CRAB in the laboratory.

Researchers engineer plant cells to produce drug for cancer

Why in News?

Researchers at the Indian Institutes of Technology Madras and Mandi have metabolically engineered plant cells to increase the production of **anti-cancer drug camptothecin (CPT).**

What was Done in the Research?

- 1) Camptothecin, an allopathic medicine, is **produced using *Nathapodytes nimmoniana*, a native, endangered plant.**
Note- The IUCN has red-listed this plant as in the past decade alone there has been a 20% decline in the plant's population.
- 2) The Plant Cell Technology Lab of IIT Madras researchers have developed **a genome-scale metabolic model for *N. Nimmoniana* plant cells using computational tools.**
- 3) Researchers have grown cultures of the plant in the lab and extracted cells from the plant. These cells are then **genetically engineered to augment the production of CPT.**
- 4) In 2021, researchers at IIT Madras identified a microbe as a sustainable and highly productive alternative source for CPT.

What is the Significance of this Research?

- 1) It offers an **alternative and sustainable source for Camptothecin**, thereby contributing to the **production of vital cancer-treating drugs.**

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2) The technology employed for model-based rational metabolic engineering of plant cells can also be adapted to **enhance the production of many other high-value phytochemicals** (chemicals produced from plants).

3) This will help to **conserve natural resources** and reduce dependency on nature.

What is Camptothecin (CPT)?

1) **Camptothecin (CPT)** is an important **anti-cancer drug lead molecule** for high-value drugs like Topotecan and Irinotecan.

2) It is extracted mainly from **Camptotheca acuminata** (native to Eastern Asia) and **Nothapodytes nimmoniana** (native to India).

3) The Chinese variety of the plant used to extract the cell is listed as critically endangered. There are only 4,000 of the species left. In India the plant is a **native of western ghats** and in the last decade there was a **20% decline in population**.

Square Kilometre Array (SKA) Project

Why in the News?

The Union Cabinet has granted approval for the Square Kilometre Array (SKA) project, with a financial sanction of Rs 1,250 crore.

What is the Square Kilometre Array (SKA) project?



Source- Deccan Herald

Specifications	Details
What is it?	1) This project is dedicated to the development of the world's largest radio telescope . 2) The SKA project will consist of a group of radio telescopes operating out of South Africa and Australia in two frequency ranges and a Square Kilometre Array Observatory headquartered at UK .
Objective	Explore galaxies in the cosmos, intricately map visible galaxies, furnish detailed data on our galaxy's evolution, seek signs of extraterrestrial life, and identify gravitational waves.
Participating Countries	Australia, Canada, China, India, Italy, New Zealand, South Africa, Sweden, the Netherlands, UK

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India's Role	1) India's primary contribution to the SKA lies in the development and operation of the Telescope Manager element —the neural network or software orchestrating the telescope's functions. 2) It has been built by Pune-based National Centre for Radio Astrophysics (NCRA) along with some other international institutes. 3) India is also making significant financial contributions to the project.
Construction Phases	The SKA will be constructed in two phases , with SKA1's first phase construction commencing in December 2022 and operations expected to start by 2029.
Significance	It will offer profound insights into the initial stages of our galaxy's evolution, and will actively explore the possibility of life beyond Earth.

ISRO successfully tests Polymer Electrolyte Membrane Fuel Cell on PSLV-C58's orbital platform POEM3

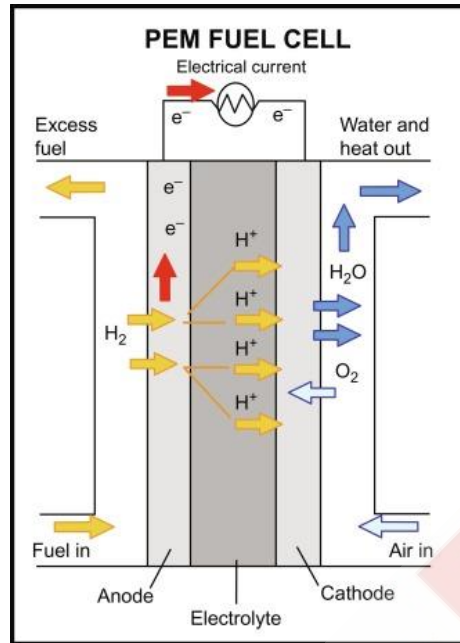
Why in the News?

ISRO successfully tested a 100 W Polymer Electrolyte Membrane Fuel Cell Power System (FCPS) on the orbital platform POEM3, which was launched onboard PSLV-C58 on January 1, 2024.

What did ISRO Observe in the Conducted Experiment?

- 1) **Objective-** To evaluate the functioning of Polymer Electrolyte Membrane Fuel cells in space and gather data to support the design of systems for upcoming missions.
- 2) During a brief test on POEM, the system **generated 180 W of power** by utilizing hydrogen and oxygen gases stored in high-pressure vessels.
- 3) It offered extensive data on the performance of diverse static and dynamic systems within the power system, as well as the underlying physics involved.
- 4) Hydrogen fuel cells **generate electricity directly from hydrogen and oxygen gases**, producing pure water and heat as byproducts. It is an **electric generator which works on electrochemical principles**, as in batteries, as against the combustion reactions employed in conventional generators.
- 5) Producing electricity directly from fuels makes fuel cells **highly efficient**, and being **emission-free** with only water as a byproduct further enhances their environmental benefits.
- 6) India is proposing to establish a **space station by 2035**, and the FCPS payload could potentially find applications in it.

What is Polymer Electrolyte Membrane Fuel Cell?



Source- ScienceDirect

- 1) Polymer electrolyte membrane (PEM) fuel cells, also called proton exchange membrane fuel cells, **use a proton-conducting polymer membrane as the electrolyte**. Hydrogen is typically used as the fuel.
- 2) These cells **operate at relatively low temperatures** and can quickly vary their output to meet shifting power demands.
- 3) They are being **developed mainly for transport applications**, as well as for stationary and portable fuel-cell applications.

Direct-to-mobile technology(D2M)

Why in the News?

The Telecommunication Engineering Centre (TEC) has identified challenges in implementing direct-to-mobile (D2M) technology which could allow streaming TV content directly to phones without an internet connection.

What is Direct-to-Mobile (D2M) technology?

- 1) Direct-to-Mobile (D2M) technology refers to the capability of delivering content, such as streaming television, directly to mobile devices **without the need for an internet connection**.
- 2) The technology is based on the **convergence of broadband and broadcast** using which mobile phones can receive terrestrial digital TV.
- 3) It would be **similar to how people listen to FM radio on their phones** where a receiver within the phone can tap into radio frequencies.

What are the Key Challenges Identified by TEC?

- 1) **Integration challenge**– Integration of smartphones supporting D2M and Digital Terrestrial TV to Mobile Devices (DTT2M) technologies poses a major challenge.

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2) **Infrastructure requirements**- Implementing D2M technologies like Advanced Television Systems Committee (ATSC) 3.0 also known as NextGen TV may require a new nationwide indoor network for quality services, adding complexity to the process.

3) **Increased cost**- Adoption of D2M technology could lead to higher cost for smartphone makers and consequently higher phone prices.

4) **Ecosystem and Viability concern**- Challenges include availability of a handset ecosystem, scalability of D2M technology, business viability and opportunities and spectrum requirements.

What are the Suggestions Given by TEC?

1) For D2M technology, it is essential to have a **standard, compatible with current mobile handsets** to ensure cost-effectiveness and capitalize on the existing ecosystem support.

2) The standard should **facilitate offloading broadcasting traffic onto phones**, enabling the design and manufacturing of smartphones capable of directly receiving broadcast signals.

High-frequency waves detected in the Martian Upper Atmosphere

Why in the News?

Scientists have detected high-frequency plasma waves in the upper atmosphere of Mars, offering valuable insights into the plasma processes within the Martian environment.

What are Plasma waves?

1) Plasma waves are **oscillations or fluctuations in the density of charged particles**, such as electrons and ions, within a plasma.

Note- Plasma is a state of matter where gas particles become ionized, leading to a mix of positively charged ions and free electrons.

2) These charged particles can collectively form various types of waves.

3) Plasma waves can **have different frequencies**, including low-frequency waves (like ion acoustic waves) and high-frequency waves (like electron plasma waves).

What observation have been made by the Scientists?

1) Researchers investigated high-frequency plasma waves in the Martian plasma environment using high-resolution electric field data from NASA's **Mars Atmosphere and Volatile Evolution Mission (MAVEN) spacecraft**.

2) They observed **two distinct wave modes** with frequency below and above the electron plasma frequency in the Martian magnetosphere.

3) These waves, categorized as **broadband or narrowband**, exhibit distinctive features in the frequency domain.

4) **Significance** – Observations of such waves provide a tool to explore how electrons gain or dissipate energy in the Martian plasma environment.

Note- The planet **Mars do not have any intrinsic magnetic field** therefore the high-speed solar wind coming from the Sun interacts directly with the Mars atmosphere, like an obstacle in the flow.

What roles do plasma waves play on Earth?

- 1) Researchers frequently observe various **plasma waves in the Earth's magnetosphere**, a magnetic field cavity around our planet.
- 2) These waves play a crucial role in **energizing and transporting charged particles** throughout the magnetosphere.
- 3) Certain plasma waves, like electromagnetic ion cyclotron waves, act as a **cleaning agent for the Earth's radiation belt, which is hazardous to our satellites**.

Subject: Environment

Eurasian Otter Spotted at Chinnar Wildlife Sanctuary in Kerala

Why in News?

Recently, Eurasian Otter (*Lutra lutra*) was spotted for the **first time in Kerala**. They were found at **Chinnar Wildlife Sanctuary in Idukki**.

What is Eurasian Otter?



Eurasian Otter

- 1) Eurasian Otter is a **semi-aquatic carnivorous mammal**.
- 2) They are **shy and nocturnal**.
- 3) The Eurasian otter lives in a **wide variety of aquatic habitats** including highland and lowland lakes, rivers, streams, marshes, swamp forests and coastal areas independent of their size, origin or latitude.
- 4) The species holds a conservation status of **“Near Threatened” on the IUCN list**.
- 5) It is classified under **Schedule I of the Indian Wildlife (Protection) Act of 1972** and falls under **Appendix I of the CITES**.
- 6) There are **three species of otters found in Kerala**, including **Eurasian Otter (*Lutra lutra*)**, **Smooth-coated Otter** and **Small-clawed Otter**.

What is the Chinnar Wildlife Sanctuary?

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Specifications	Details
Location	Idukki District, Kerala
Geographical Features	1) It is a prominent chunk of the block of protected forests growing in the Annamalai hills in the Kerala-Tamil Nadu border. 2) The sanctuary's landscape is characterized by rocky terrains, hillocks, and valleys.
Wildlife Sanctuary	Kodaikanal Wildlife Sanctuary is to its East and Indira Gandhi Wildlife Sanctuary is to the north.
Vegetation	Dry Deciduous Forests, Wet Grasslands, High Sholas, Dry Thorny Scrub Forests, and Riparian Forests.
Rivers	Chinnar and Pambar are the major rivers flowing through it.
Flora	Among the 1000 species of flowering plants, some of the rarely found species include Elaeocarpus recurvatus , Arabica , Acacia leucophloea , Santalum album , Neelakurinji , etc.
Fauna	1) The Chinnar Wildlife Sanctuary provides a home to endangered species such as Grizzled Giant Squirrel , Gaur , Rusty-Spotty Cat , Sambar , Nilgiri Tahr , Bonnet Macaques , Tufted Grey Langur , Spotted Deer , etc. 2) It is also famous for preserving a diverse range of birds such as Black Eagle , Yellow-throated Bulbuls , Grey Heron , Serpent Eagle , Little Egret , etc. 3) The sanctuary also houses 156 species of butterflies, 42 species of fishes and several other reptiles along with some notable insects. 4) It is the only rehabilitation centre for the Indian Star Tortoise in India.

Wetland City Accreditation: MoEFCC nominates first 3 cities from India

Why in the News?

MoEF&CC has nominated Indore (Madhya Pradesh), Bhopal (Madhya Pradesh), and Udaipur (Rajasthan) for **Wetland City Accreditation (WCA) under the Ramsar Convention on Wetlands**.

What is Wetland City Accreditation (WCA) Scheme?

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Source- Ramsar.org

Specifications	Details
What is it?	It is a voluntary system under the Ramsar Convention to acknowledge cities that have taken exceptional measures to conserve and protect urban and peri-urban wetlands . It was introduced in 2015.
Aim	To enhance the conservation and sustainable utilization of urban and peri-urban wetlands, providing socio-economic benefits for local communities.
Accreditation criteria	The Operational Guidance for WCA of the Ramsar Convention on Wetlands encompasses six international criteria that a city must meet to qualify.
Significance for India	<ol style="list-style-type: none"> 1) The WCA allows cities to gain international recognition for their efforts in protecting their wetlands. 2) It will also raise public awareness about urban wetland conservation. 3) Further, it will aid in nationwide implementation of Amrit Dharohar initiative by MoEF&CC.

Important wetlands of these three nominated cities:

Indore	Bhopal	Udaipur
The city has 2 Ramsar sites- Sirpur Lake and Yashwant Sagar .	Bhoj Wetland , a Ramsar Site	The city is surrounded by five major wetlands, namely, Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar, and Doodh Talai

Subject: Schemes & Programmes

Ayodhya Dham Railway Junction and Amrit Bharat Express

Why in the News?

PM Narendra Modi has unveiled the revamped Ayodhya Railway Station, launched new Amrit Bharat and Vande Bharat trains, and dedicated numerous other railway projects to the nation.

What are the different railway projects inaugurated by the PM?

1) **Inaugurated Phase 1 of Ayodhya Dham Junction Railway Station** with modern amenities such as elevators, escalators, food plazas etc. The station is 'accessible for all' and holds an '**IGBC certified green station building**' status.

Note- The IGBC Green Railway Stations rating system stands as the first comprehensive rating system in India, addressing environmental sustainability specifically in Indian railway stations.

2) **PM flags off two new Amrit Bharat trains:** Darbhanga-Ayodhya-Anand Vihar Terminal and Malda Town-Sir M. Visvesvaraya Terminus (Bengaluru) Express.

3) **PM launches six new Vande Bharat Trains**, including routes such as Shri Mata Vaishno Devi Katra-New Delhi, Amritsar-Delhi, Coimbatore-Bangalore Cantt, Mangalore-Madgaon, Jalna-Mumbai, and Ayodhya-Anand Vihar Terminal.

4) **PM dedicates three railway projects** worth Rs. 2300 crore for regional rail infrastructure strengthening. Projects involve Roomba Chakeri-Chanderi third line, sections of Jaunpur-Ayodhya-Barabanki doubling, and Malhaur-Daliganj doubling and electrification.

What is Amrit Bharat Express?



Source- Wikipedia

1) The Amrit Bharat Express, formerly known as Vande Sadharan, is a **non-air-conditioned, cost-effective sleeper cum unreserved service** express trains run by the Indian Railways.

2) They will connect cities over 800 km apart or requiring more than ten hours of travel with existing services.

3) **Manufactured by:** Integral Coach Factory at Chennai.

4) **First service:** 30 December 2023

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5) Features:

- a. This train runs on “push-pull” technology featuring locomotives at both ends for better acceleration.
- b. The trains will operate at a maximum speed of 130 km/h.
- c. Each train-set consists of 22 coaches.
- d. It provides improved facilities for rail passengers like comfortable seats, better luggage rack, mobile charging point with suitable mobile holder, LED lights, CCTV, public information system, among others.

SMART 2.0 Program

Why in news?

Recently, the Central Council for Research in Ayurvedic Sciences (CCRAS) along with National Commission for Indian System of Medicine (NCISM) has launched ‘SMART 2.0’ (Scope for Mainstreaming Ayurveda Research among Teaching professionals) program.

What is ‘SMART 2.0’ Programme?

- 1) It is a program to promote robust clinical studies in priority areas of Ayurveda with Ayurveda academic institutions/ hospitals across the country through mutual collaboration.
- 2) The objective of ‘SMART 2.0’ is to generate tangible evidence to demonstrate the efficacy and safety of Ayurveda interventions and translating it into public health care.
- 3) The study under the programme aims at safety, tolerability and adherence to Ayurveda formulations in the priority research areas such as malnutrition, insufficient lactation, abnormal uterine bleeding, etc.
- 4) Under the ‘SMART 1.0’, around 10 diseases were covered with the active participation of teaching professionals from 38 colleges.

What is Central Council for Research in Ayurvedic Sciences (CCRAS)?

- 1) CCRAS is an apex organization functioning under the Ministry of Ayush.
- 2) It works for the formulation, co-ordination, development and promotion of research on scientific lines in Ayurveda.

What is National Commission for Indian System of Medicine?

- 1) The National Commission for Indian System of Medicine is the statutory body constituted under NCISM Act, 2020.
- 2) The NCISM aims to enhance access to quality and affordable Ayurveda, Unani, Siddha, and Sowa-Rigpa (AUS&SR) medical education.
- 3) It strives to ensure the availability of proficient AUS&SR medical professionals nationwide, promoting equitable and universal healthcare with a community health perspective.
- 4) The commission encourages the adoption of the latest medical research, maintains a national AUS&SR medical register, enforces high ethical standards, and establishes an effective grievance redressal mechanism.

National Transit Pass System

Why in News?

Recently, the central government has launched the National Transit Pass System (NTPS).

What is the National Transit Pass System?

- 1) The National Transit Pass System (NTPS) was launched to facilitate the **seamless transit of timber, bamboo, and other forest produce** across the country through a single permit.
- 2) The NTPS is envisioned as a **“One Nation-One Pass” regime**.
- 3) With this permit, individuals involved in the forest and agroforestry sector will no longer need permits from multiple states to facilitate the transit of their goods.
- 4) The **QR coded transit permits** generated under NTPS will allow check gates across various states to verify the validity of the permits and allow seamless transit.
- 5) **Transit permits will be issued for tree species which are regulated**, while the users can self-generate “No Objection Certificates” for exempted species.
- 6) As of now, **25 States and Union Territories** have adopted the unified permit system, simplifying interstate business operations for producers, farmers, and transporters.

PRERANA Program

Why in the News?

The Ministry of Education launched ‘Prerana: An Experiential Learning Program’ empowering participants with leadership qualities.

What is PRERANA program?

Specifications	Details
What is it?	It is a week-long residential program for selected students, combining heritage with innovation through experiential and inspirational learning, enhanced with cutting-edge technology.
Eligibility	Students of Class IX to XII from any recognised school of the country.
Selection process	<ol style="list-style-type: none">1) Students can register on the portal by providing necessary details.2) Alternatively, applicants can join the School/block-level selection on ‘Prerana Utsav’ day, through activities aligned with Prerana’s ethos.3) Two students (01 boy and 01 girl) will be selected for Prerana program from each district.

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Features	<ol style="list-style-type: none">1) A batch of 20 selected students (10 boys and 10 girls) will attend the program, every week from various parts of the country.2) It will take place in a Vernacular School, founded in 1888, located in Vadnagar, Gujarat. PM Modi is an alumnus of this School.3) Curriculum of Prerana School prepared by IIT Gandhi Nagar.
Activities under the Program	<ol style="list-style-type: none">1) The daily schedule includes yoga, mindfulness, and meditation, followed by experiential learning, themed sessions, and hands-on activities.2) Evenings feature visits to ancient sites, inspirational films, creative missions, talent shows, promoting holistic learning.3) Students also participate in diverse activities, integrating indigenous knowledge, cutting-edge technologies, and insights from inspirational figures.
Significance	<ol style="list-style-type: none">1) Participants will take Prerana's ethos back to their communities, becoming catalysts for positive change and inspiring others.2) It will incorporate the principles of the Indian education system and the value-based education philosophy, a cornerstone of the National Education Policy (NEP) 2020.

PRITHvi Vigyan (PRITHVI) Scheme

Why in the News?

The Union Cabinet has approved the "PRITHvi Vigyan (PRITHVI)" scheme. The scheme will be implemented from 2021-26 with a total cost of Rs. 4,797 crore.

What is PRITHvi Vigyan (PRITHVI) Scheme?

Aspect	Details
What is it?	It is a comprehensive scheme that will address all five components of the Earth system (atmosphere, hydrosphere, geosphere, cryosphere, and biosphere), enhancing the understanding of Earth System Sciences and delivering reliable services for the country.
Objectives	<ol style="list-style-type: none">1. Enhancing and maintaining long-term observations of the atmosphere, ocean, geosphere, cryosphere, and solid earth to monitor essential indicators of Earth System dynamics and changes.2. Creating modeling systems to comprehend and forecast weather, ocean conditions, and climate risks while studying the science behind climate change.3. Exploring polar and high seas regions for the discovery of new phenomena and resources.4. Developing technology for sustainable exploration and utilization of oceanic resources for societal applications.5. Translation of knowledge and insights from Earth systems science into services for societal, environmental and economic benefit.

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Nodal Ministry	Ministry of Earth Science
Implemented from	2021-26
Components	<ol style="list-style-type: none">1. It will subsume five existing schemes of the Ministry of Earth Sciences (MoES) namely-<ol style="list-style-type: none">a. ACROSS (Atmosphere & Climate Research-Modelling Observing Systems & Services)<ul style="list-style-type: none">- It focuses on long-term observations and advanced modelling systems for weather and climate predictionsb. O-SMART (Ocean Services, Modelling Application Resources and Technology)<ul style="list-style-type: none">- It targets sustainable exploration and utilization of marine resources, utilizing cutting-edge technologyc. PACER (Polar Science and Cryosphere Research)<ul style="list-style-type: none">- It aims to explore the mysteries of the Earth's poles and glacial regions, contributing to a deeper understanding of global climate changesd. SAGE (Seismology and Geosciences)<ul style="list-style-type: none">- It strives to strengthen earthquake monitoring and research on the Earth's solid componentse. REACHOUT (Research, Education, Training, and Outreach)<ul style="list-style-type: none">- It fosters talent development and ensures effective translation of research into services directly benefiting society

Subject: Art & Culture

Maharishi Valmiki International Airport

Why in the News?

Recently the Prime Minister inaugurated the **Maharishi Valmiki International Airport** in **Ayodhya, Uttar Pradesh**.

What are the Key features of the airport?



Maharishi Valmiki Airport, Ayodhya Source: Livemint

- 1) The airport is **dedicated and named after Maharishi Valmiki**, a revered sage credited as the **author of the oldest version of the Ramayana**.
- 2) The interiors of the terminal Building are decorated with **local art, paintings & murals depicting the life of Bhagwan Shri Ram**.
- 3) The terminal building of Ayodhya Airport is also equipped with various **sustainability features** like an insulated roofing system, LED lighting, rainwater harvesting, landscaping with fountains,
- 4) It also includes a water treatment plant, a sewage treatment plant, solar power plant to meet the five-star **GRIHA (Green Rating for Integrated Habitat Assessment) ratings**.

Who is Maharishi Valmiki?

- 1) **Valmiki** is referred to as *Adi Kavi*, which translates to the **“first/original poet”** in Sanskrit.
- 2) He is credited with **composing the Ramayana**, one of the earliest and most revered epic poems in the Sanskrit literary tradition.
- 3) Valmiki’s Ramayana is **composed of 24,000 verses and is divided into 7 kandas (books)**, each telling a different part of Lord Ram’s story. Valmiki himself makes an appearance in the Bala and Uttara Kandas.
- 4) **Valmiki Jayanti**, also known as **Pargat Diwas**, is celebrated annually to commemorate the birth anniversary of Maharishi Valmiki. It is celebrated on the **full moon day of the Hindu month of Ashvin** (September-October).

Savitribai Phule

Why in news?

January 3, 2024, marks the **193rd birth anniversary** of Savitribai Phule.

Who is Savitribai Phule?



Savitribai Phule

- 1) Savitribai Phule, a **Dalit woman** from the Mali community, was born on January 3, 1831, in the village of **Naigaon in Maharashtra**.
- 2) She was **married to Jyotirao Phule (a social reformer)** at a young age and he provided her education at home.

What are the Contributions of Savitribai Phule?

I. Education:

- 1) Savitribai, alongwith her husband Jyotirao Phule, pioneered **India's earliest girls' school in Bhidewada, Pune, in 1848**, shattering patriarchal barriers.
- 2) She became **India's first woman teacher and first Indian headmistress**.
- 3) The couple opened more such schools for **girls, Shudras, and Ati-Shudras (the backward castes and Dalits, respectively)** in Pune.
- 4) **Pune University bears the name of Savitribai Phule**, serving as a tribute to this formidable woman who passionately advocated for women's education in India.

II. Social Reform and Activism:

- 1) Along with Jyotirao, Savitribai started the **Balhatya Pratibandhak Griha** ('Home for the Prevention of Infanticide') as a care centre for children who were victims of rape, sati and those who escaped female infanticide.
- 2) Savitribai Phule also **advocated inter-caste marriages, widow remarriage, and eradication of child marriage, sati and dowry systems**, among other social issues.
- 3) In **1873**, the Phules established the **Satyashodhak Samaj**, which translates to the '**Truth-seekers' Society**.' This platform welcomed individuals regardless of their caste, religion, or class hierarchies, with the primary goal of promoting social equity.
- 4) They also introduced the '**Satyashodhak Marriage**,' which **rejected Brahmanical rituals**. In this ceremony, the marrying couple pledged to **advocate for education and equality**.
- 5) Savitribai became involved in **relief work during the 1896 famine in Maharashtra** and the **1897**

Bubonic plague.

III. Literary work:

- 1) Savitribai Phule published her first collection of poems, called **Kavya Phule ('Poetry's Blossoms')** in 1854.
 - 2) She also wrote the famous poem '**Go Get Education**' to encourage the oppressed and backward classes to obtain an education.
- Savitribai Phule's life concluded on **March 10, 1897**, as she succumbed to an illness while endeavoring to protect a sick 10-year-old boy.

10th century Kadamba Inscription found in Goa

Why in news?

A 10th century A.D. Kadamba inscription written in Kannada and Sanskrit has been found in Goa.

What are the Findings?



Kadamba Inscription

- 1) The Kadamba Inscription has been found in the **Mahadeva temple at Cacoda in southern Goa.**
- 2) The epigraph is engraved in **Kannada and Nagari characters of the 10th century AD.**
- 3) The record is composed as a **vocal statement on the death of his son from the mouth of a grieving father.** It 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.
- 4) It is in the **literary style of the Talangre inscription of Jayasimha I** of the same period.

Who were the Kadambas of Goa?

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- 1) The Kadambas of Goa served as **subordinates to the Chalukyas of Kalyana**.
- 2) They ruled Goa from the **10th to the 14th century CE**.
- 3) Chandor, formerly known as Chandrapur, was the capital of this Kadamba dynasty, and also an important port.
- 4) Emperor **Tailapa II of the Chalukyan dynasty** appointed Kadamba Shasthadeva as **Mahamandaleshwara of Goa** in recognition of his assistance in **dethroning the Rashtrakutas**.
- 5) In 960 AD, **Kadamba Shasthadeva successfully captured the city of Chandavara from the Shilaharas**.
- 6) Subsequently, he **conquered the port of Gopakapattana**, known as present-day Goa.

Subject: Geography & Places in News

Navy thwarts hijacking attempt in Arabian Sea

Why in the News?

Indian Navy Marine Commandos (MARCOS) successfully thwarted a hijacking attempt in the North Arabian Sea, ensuring the safe evacuation of all 21 crew members, including 15 Indians, from the merchant vessel Lila Norfolk.

What Occurred at the Merchant Vessel Lila Norfolk?

- 1) The bulk carrier Lila Norfolk reported **boarding by five to six unknown armed persons off the coast of Eyl, Somalia**, on the U.K. Maritime Trade Operations portal.
- 2) In response, the Indian Navy diverted the **destroyer INS Chennai** which was on anti-piracy patrol, and an Maritime Patrol Aircraft confirmed the crew's safety during a morning overflight.
- 3) Indian Navy **Marine Commandos** onboard the deployed warship boarded the vessel and initiated the sanitization process.

Who are MARCOS?

- 1) The Marine Commandos, known as MARCOS and formally referred to as the Marine Commando Force (MCF), serve as the **Indian Navy's special forces unit**, tasked with executing specialized operations.
- 2) **Established in 1987**, MARCOS exhibits versatility by proficiently operating across various environments, including **sea, air, and land**.
- 3) In the late 1980s, MARCOS carried out '**Operation Pawan**' in the Sri Lankan Civil War, playing a crucial role in restoring peace by capturing key LTTE-held territories.



Source- WorldAtlas

Where is Somalia and What are its Features?

Aspect	Details
What is it?	It is a country situated in the Horn of Africa (large peninsula and geopolitical region in East Africa).
Surrounding borders	The country is bordered by 1. Ethiopia to the west 2. Djibouti to the northwest 3. the Gulf of Aden to the north 4. The Indian Ocean to the east 5. Kenya to the southwest
Important Features	1. It has the longest coastline on Africa's mainland . 2. It has been described as Africa's most culturally homogeneous country . 3. Cal Madow is a mountain range in the northeastern part of the country (it features Somalia's highest peak- Shimbiris).

Note– Countries called the Horn of Africa: SEED

S- Somalia , E- Ethiopia, E- Eritrea, D- Djibouti

Source- ForumIAS

Subject: Miscellaneous

DESERT CYCLONE: India-UAE Joint Military Exercise

Why in the News?

A 45-member UAE Land Forces group has arrived in India for the inaugural India-UAE Joint Military Exercise, 'DESERT CYCLONE.'

What is 'DESERT CYCLONE'?

Aspect	Details
What is it?	It is a joint military exercise between India and UAE.
Aim	1) To improve interoperability in Sub-conventional Operations, including Fighting in Built-Up Area (FIBUA) in desert/semi-desert terrain under Chapter VII of the UN Charter on Peacekeeping Operations. 2) To achieve shared security objectives and foster bilateral relations between two friendly nations.
Started in	2024 (First Edition)
Participating contingents	1) Indian Army - Represented by a Battalion from the Mechanised Infantry Regiment. 2) UAE - Represented by troops from the Zayed First Brigade.
Significance	1) It will enhance cooperation and interoperability between both the sides during Peace Keeping Operations. 2) It will also foster collaborative partnership and help in sharing best practices between the two sides.

Rashtriya Khel Protsahan Puruskar 2023

Why in the News?

The Ministry of Youth Affairs & Sports has declared the 'Rashtriya Khel Protsahan Puruskar' for 2023. The recipients will be honored by the President of India at a dedicated event held at Rashtrapati Bhavan.

What is the Rashtriya Khel Protsahan Puruskar?

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Name of Award: Rashtriya Khel Protsahan Puruskar 2023

S. No.	Category	Entity awarded for Rashtriya Khel Protsahan Puruskar 2023
1.	Identification and nurturing of budding / young talent	Jain Deemed to be University, Bengaluru
2.	Encouragement to sports through Corporate Social Responsibility	Odisha Mining Corporate Limited

Source- PIB

1) The Rashtriya Khel Protsahan Puruskar is awarded to corporate entities (private and public sector), Sports Control Boards, NGOs, and sports bodies at the State and National levels that have **actively contributed to the promotion and development of sports**.

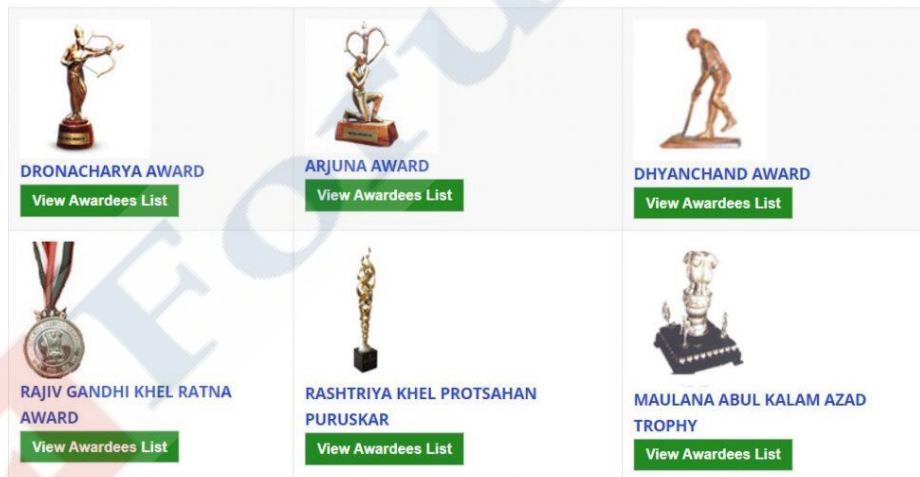
2) Introduced in 2009, the scheme was later revised in 2015.

3) As per the revised plan, this award is presented in **four categories**:

- Identifying and nurturing budding/young talent.
- Promoting sports through Corporate Social Responsibility (CSR).
- Providing employment to sportspersons and implementing sports welfare measures.
- Supporting Sports for Development.

4) The **applications were invited online** and sportspersons/coaches/entities were permitted to self-apply through a dedicated Online Portal.

What are the other National Sports Awards of India?



Source- DD News

Awards	Details
Major Dhyan Chand Khel Ratna Award	1) Highest sporting honour of India. 2) The award recipients are honored for their exceptional performance in international sports events in the preceding four years.

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The Arjuna Award	1) India's second-highest sporting honor. 2) Recipients recognized for their outstanding performance in international and national sports events along with display of leadership, sportsmanship, and discipline.
The Dronacharya Award	Awarded for excellence in sports coaching.
The Major Dhyan Chand Award	It is a lifetime achievement award given to honour sportspersons for their contributions, both during their active sporting career and after retirement.
The Maulana Abul Kalam Azad Trophy (MAKA Trophy)	It is a rolling trophy awarded to the " overall top performing University in sports " over the preceding year.
Rashtriya Khel Protsahan Puruskar	Given to corporate entities, NGOs, sports bodies, etc for their contribution to the promotion and development of sports.