

GAGAN SATELLITE TECHNOLOGY.

Recently, the Prime Minister of India lauded Asia's first demonstration of Performance-Based Navigation for helicopters for a flight from Juhu to Pune using GAGAN satellite technology.



About GAGAN satellite technology:

- GAGAN is the acronym for **GPS Aided GEO Augmented Navigation**.
- It is jointly developed by **ISRO** (Indian Space Research Organisation) and the **Airports Authority of India (AAI)**.
- It uses a system of ground stations to provide necessary augmentations to the GPS standard positioning service (SPS) navigation signal.
- It is designed to provide the additional **accuracy, availability, and integrity necessary** to enable users to rely on GPS for all phases of flight.
- It also provides the capability for increased accuracy in position reporting, allowing for more uniform and high-quality Air Traffic Management (ATM).
- In addition, GAGAN will provide benefits beyond aviation to all modes of transportation, including maritime, highways, and railroads.
- There are **only four Space-Based augmentation systems** available in the world namely India (GAGAN), US (WAAS), Europe (EGNOS) and Japan (MSAS).

What is Performance-Based Navigation (PBN)?

- The PBN concept specifies aircraft RNAV system performance requirements in terms of **accuracy, integrity, availability, continuity and functionality** needed for the proposed operations in the context of a particular Airspace Concept.
- This concept represents a **shift from sensor-based to performance-based navigation**.
- Performance requirements are identified in navigation specifications, which also identify the choice of navigation sensors and equipment that may be used to meet the performance requirements.

WHAT IS GIFT TAX?

Recently, the Central Board of Direct Taxes (CBDT) has exempted buyers from gift tax when they acquire equity shares in public-sector units (PSUs) through strategic disinvestment.



About Gift Tax:

- The Parliament of India introduced the **Gift Tax Act in 1958**, and gift tax is essentially the tax charged on the receipt of gifts.
- The Income Tax Act states that gifts **whose value exceeds Rs.50,000** are subject to gift tax in the hands of the recipient.
- The gift tax is also applicable on certain transfers that are not considered a gift.
- The transfer of existing movable or immovable property in money or money's worth qualifies for gift tax.
- The gift is exempted from tax if **it was given by a relative**.
- The income tax rule Parent, Spouse, Siblings, Spouse's siblings, Lineal descendants Lineal descendants of the spouse can be considered as a relative
- There are several other situations where gifts can be exempted from tax. Listed below are other situations in which the gift will be exempted from tax.
 - **Gifts received during weddings** are usually exempted from tax.
 - Gifts received as **part of the inheritance** are exempted from tax.
 - Cash or **rewards received by local authorities** or educational institutions based on merit is exempted from tax.

WHAT IS SEDITION LAW?

The Law Commission of India recently recommended retention of the sedition law and enhancement of the minimum punishment to seven years in jail from the current three years.



About Sedition Law:

- **Section 124A of the Indian Penal Code (IPC)** deals with sedition.
- **History of Sedition Law:**
 - **Section 124A** was drafted by **Thomas Babington Macaulay** and included in the **IPC in 1870**.
 - The section was first included to **address the growth of Wahabi activity** between 1863 and 1870. The **colonial authorities** faced a **difficulty** as a result of these actions.

Post-Independence:

- **After independence**, the term “**sedition**” was removed from the **Constitution in 1948**, after debate in the **Constituent Assembly**.
- **Jawaharlal Nehru** proposed the **first amendment to the Constitution in 1951**, which **limited freedom under Article 19 (1) (a)** and gave the state the authority to impose “**reasonable restrictions**” on the right to free expression.
- **Indira Gandhi’s government** made **section 124A a criminal offense for the first time in Indian history**. The new **Code of Criminal Procedure, 1973**, which came into effect in 1974 and repealed the **1898 Colonial-Era Code of Criminal Procedure**, **made sedition a knowable crime**.
- **What does Section 124 A states?**
 - It states, “**Whoever, words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the Government established by law in India shall be punished with imprisonment for life, to which fine may be added, , or with imprisonment** which may extend to three years, which fine may be added, or with fine.”
 - In simple words, this means **anyone who attempts to create hatred, contempt, or disaffection towards the government can be punished** under the sedition law.
- **Punishment:**
 - Sedition is a **non-bailable offence**.
 - Punishment under the law **varies from imprisonment up to three years to a life term and fine**.
 - A person **charged under this law can’t apply for a government job**. They have to **live without their passport** and must **present themselves in the court as and when required**.

WHAT IS DA VINCI ROBOTIC SURGICAL SYSTEM?

Apollo Hospitals, Ahmedabad, a pioneer in healthcare innovation, recently launched the Da Vinci Xi Robotic Surgical System.



About Da Vinci Robotic Surgical System:

- It is a tool that helps surgeons perform a variety of surgeries including gynecological surgeries, urological, head and neck, thoracic, colorectal, cardiac and general surgeries.
- Because the da Vinci only uses small cuts, it's less traumatic on your body, resulting in less pain, fewer complications and a shorter recovery time.
- It can be used in the field of colorectal surgeries, urology, oncology, gynaecology thoracic, cardiology, paediatric and gastro-intestinal surgeries, kidney transplants and in liver transplantation.
- The machine is made up of three different parts:
 - The console/control center: The surgeon operates while seated at a console unit, using hand and foot controls and with a magnified, 3D, high-definition view.
 - The patient cart: The cart holds surgical instruments and the camera.
 - The vision cart: This cart has a video screen so that the healthcare providers in the room can see what's happening during the surgery.

What is a Da Vinci surgery?

- A Da Vinci surgery is when your surgery is performed using the da Vinci Surgical System, a machine that uses four thin robotic arms.
- The robotic instruments have a wider range of motion than the human hand. Surgeons can use the surgical system for a variety of procedures.
- What's the difference between a da Vinci surgery and an open surgery?
 - Use of the da Vinci system makes your surgery "minimally invasive" (smaller incisions).
 - The procedure uses small cuts (less than or equal to 1 centimeter long), tiny surgical instruments, fewer stitches and a laparoscope (a telescope) which is a thin tube with a light and a camera lens.

- This is **different than traditional surgeries that use larger, more invasive cuts through skin, tissues and muscles.**
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ADI KAILASH

Over 180 pilgrims, returning from Adi Kailash, were recently rescued by a joint team of the state disaster response force (SDRF), revenue police and Seema Suraksha Bal (SSB) from Najang, where they had been stranded following a massive landslide.



About Adi Kailash:

- It is considered to be **one of the five Kailash mountains** and is believed to be the **abode of Lord Shiva.**
- It is also **known as Shiva Kailash, Chota Kailash, Baba Kailash, or Jonglingkong Peak.**
- **Location:**
 - It is located in the **Pithoragarh district of Uttarakhand.**
 - It is situated among the **Kumaon Himalayan** mountain range.
 - It lies in **close proximity to the Indo-Tibetan border near Sin La Pass.**
- **Altitude: 6310 meters**
- Adi Kailash is known as the **replica of Kailash Mansarovar.** It is immensely popular among **devotees of Shiva.**
- It is **scripted in Hindu Mythology that Shiva meditated and stayed at Adi Kailash for some time.**

What is Pancha Kailash?

- These are the **five holy peaks that are said to be the abodes of Lord Shiva.**
 - The five peaks are **Kailash Manasarovar, Adi Kailash, Kinnaur Kailash, Shrikant Mahadev Kailash and Manimahesh Kailash.**
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NEW GUIDELINES FOR GRANTING DEEMED UNIVERSITY STATUS

Why in news?

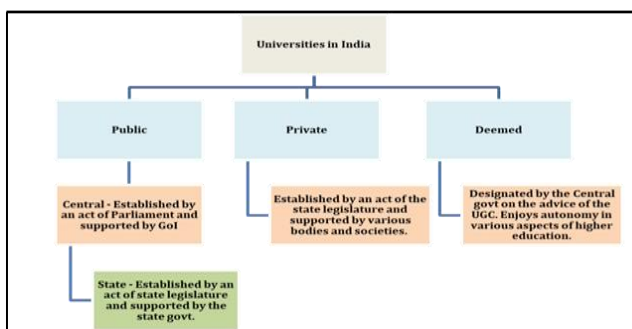
- Union Education Minister has released the UGC (Institutions Deemed to be Universities) Regulations, 2023, which will replace the 2019 guidelines.
- The revised guidelines have simplified the eligibility criteria in order to establish more quality-focused deemed universities.

The University Grants Commission (UGC):

- The UGC was established as a statutory body in November 1956 by the UGC Act 1956.
- It is set up by the Ministry of Education's Department of Higher Education.
- A proposal to replace it with another new regulatory body called the Higher Education Commission of India (HECI) is under consideration by the Government of India.

Mandate:

- The UGC has the unique distinction of being the only grant-giving agency in the country which has been vested with two responsibilities of:
 - Providing funds



- Coordination, determination and maintenance of standards in institutions of higher education.

Deemed Universities

- The term deemed university refers to institutions of higher education that

have been granted the status of a university by the Department of Higher Education, Ministry of Education.

- Deemed universities are autonomous institutions that have the authority to award degrees and diplomas in their own name.
 - There are around 170 deemed institutions in the country currently.
- They enjoy certain privileges and have the freedom to design their own curriculum, conduct admissions, and set their own academic standards.
- The status of a deemed university is granted to an institution based on its overall academic excellence, research contributions, and infrastructure.

- Typically, these institutions focus on specific areas of study such as engineering, medicine, management, arts, and sciences.
- These universities are subject to periodic reviews by the University Grants Commission (UGC) to ensure compliance with regulations.

New Guidelines

- **Framed on the principle of a "light but tight"**
 - The new rules are built on the principle of a "light but tight" regulatory framework envisioned in the National Education Policy 2020.
- **Changed criteria**
 - Under the 2019 guidelines, the higher education institutions having existence for not less than 20 years were eligible for applying for the status.
 - In the revised guidelines, it has been replaced with:
 - multi-disciplinarity,
 - NAAC grading,
 - NIRF ranking and
 - NBA grading.
 - It means any multi-disciplinary institution will be able to apply for the deemed status if they have:
 - valid accreditation by NAAC with at least 3.01 cumulative grade point average (CGPA) for three consecutive cycles,
 - NBA accreditation for two-thirds of eligible programmes for three consecutive cycles or
 - in the top 50 of any specific categories of NIRF for the last three years continuously.
 - Hence, higher education institutions which are less than 20 years old will now be eligible to apply for deemed university status, provided they fulfil the above criteria.
 - A cluster of institutions managed by more than one sponsoring body or a society can also apply for deemed to be university status.
- **Criteria to set up off-campus centres**

- Deemed universities with minimum 'A' grade and above or ranked from 1 to 100 in the universities category of NIRF rankings of the relevant year are eligible to set up off-campus centres.
- Institutions declared as deemed to be university under a distinct category can apply for off-campus after five years of their declaration if they are accredited with an A grade or figured in the top 100 in the 'universities' category of NIRF.
- **Other criteria**
 - Among other criteria that have been changed are:
 - the faculty strength has been increased from 100 to 150,
 - corpus fund for private institutions has been increased from Rs 10 crore to Rs 25 crore, and
 - creation of an executive councils like central universities in these universities as well.
 - Deemed universities must register on Academic Bank of Credits (ABC).
 - ABC is a virtual/digital storehouse that contains the information of the credits earned by individual students throughout their learning journey.

LITHIUM RESERVES IN INDIA

Why in News?

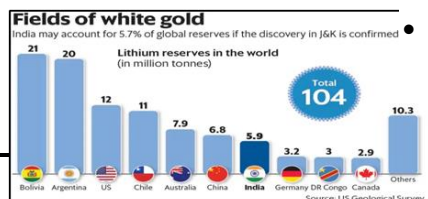
- The news of potentially significant reserves of lithium in J&K and Rajasthan in India has been welcomed universally.

About Lithium:

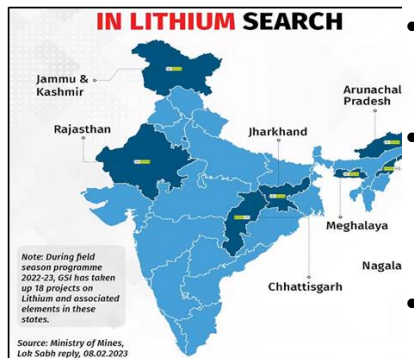
- It is a soft, silvery-white **non-ferrous metal** and is **one of the key components in rechargeable batteries** for mobile phones, laptops, digital cameras and electric vehicles.
- It is also used in some non-rechargeable batteries for things like **heart pacemakers, toys and clocks.**

Lithium Reserves in India:

- The Geological Survey of India (GSI) had for the **first time in India's history** established Lithium inferred resources of 5.9 million tonnes in **Jammu and Kashmir's Reasi district.**



- Months after India's first lithium reserves, the GSI has found another reserve of the crucial mineral in Degana in Rajasthan's Nagaur district.
- These reserves are believed to be much bigger in quantity (than found in J&K) and can meet 80% of the total country's demand.



Why Access to or Control over Lithium is Important?

- India's electric-vehicle (EV) market was valued at \$383.5 million in 2021, and is expected to expand to \$152.21 billion in 2030.
- India imported 450 million units of lithium batteries valued at \$929.26 million (₹6,600 crore) in 2019-2020.
- The ongoing global transition to low-carbon economies, the rapid expansion of artificial intelligence (AI), and 5G networks will greatly reshape global and regional geopolitics.

Who Should Own these Minerals?

- **Private ownership:** In 2013, the Supreme Court of India ruled that the owner of the land has rights to everything beneath.
- **Public ownership:** Forests (which make up more than 22% of India's landmass), hills, mountains, and revenue wasteland are publicly owned.
- **Ownership of Lithium:** According to the SC, the Union government could ban private actors from mining sensitive minerals, as is already the case with uranium under the Atomic Energy Act 1962.
- In today's context, lithium is as important as uranium.