

CHINA'S CHANG'E 6 VS INDIA'S CHANDRAYAAN-4 MISSIONS

Why in News?

China launched a “first-of-its-kind mission”, Chang'e-6 spacecraft. It comes amid the buzz around the Indian Space Research Organisation (ISRO) planning its next Moon mission - Chandrayaan-4.

What is the Chang'e 6 Lunar Probe?

As per the CNSA, the **Chang'e 6 is the world's first attempt to retrieve substances from the moon's far side** - the side which is not visible from the Earth. It was launched onboard the **Long March-5 Y8 carrier** rocket from the Wenchang Spacecraft Launch Site in south China's Hainan Province. **Till date**, the US, the former Soviet Union and China have brought lunar samples back to Earth, but none has ever obtained samples from the far side of the moon.

What is the Aim of the Chang'e 6 Lunar Probe? The spacecraft consists of four components –

an orbiter, a lander, an ascender and a re-entry module. After carrying out the surface operations, the ascender's rocket will elevate it to lunar orbit to dock with the re-entry module. **It will transfer samples to the module, which will carry them to Earth.**

What we Know About Chandrayaan 4 Mission?

While Chang'e 6 mission aims to bring back samples from the Moon's far side, **India's Chandrayaan 4 mission is being built to bring samples from the Moon's south pole region.** It is expected to be launched in **2027**. Also, ISRO chief S Somanath recently said Chandrayaan-4 is the **first step towards achieving the goal of India landing an astronaut on the moon in 2040.**

How Chandrayaan 4 Mission may be Executed?

The next lunar mission will likely involve a PSLV and an LVM3 as launch vehicle options. The mission will include five spacecraft modules - Re-entry module (RM), Transfer Module (TM), Ascender Module (AM), Descender Module (DM) and Propulsion Module (PM).

WILL R&AW'S OVERSEAS OPERATIONS AFFECT TIES?

Why in News?

India's R&AW was in the spotlight, as reports came in from the US, Canada and Australia of the alleged killing of Indian-origin Khalistani separatist operatives around the world, spearheaded by the agency.

What are the Charges?

1. **America** believes that India's external intelligence agency Research and Analysis Wing (R&AW) had approved an assassination operation (that was foiled) against **Gurpatwant Singh Pannun** - a Khalistani activist lawyer of US and Canadian nationality.
2. **The Royal Canadian Mounted Police** arrested and charged three Indian nationals for conspiring in the Nijjar killing, and it is investigating their links to Indian agencies.
3. **Reports from Australia** claim that R&AW operatives had been expelled in 2020 after Australian Security Intelligence Organisation (ASIO) concluded that they carried out surveillance of Khalistani separatists in the country.

How has New Delhi Reacted?

The Ministry of External Affairs has consistently held that **extra-judicial killings are not "government policy"**. However, there is a **variance in the government's responses** on the claims of US, Canada and Australia: silence on Australia; angry denials and punitive measures against Canada; the setting up of a "high level inquiry" into the US's indictment.

Will There be a Diplomatic Fallout?

With the exception of Pakistan and now Canada, **India's ties with the countries where such operations have allegedly been carried out remain strong**. India is certainly not the only country to be accused of carrying out extra-judicial, extra-territorial attacks. However, in the shadowy world of intelligence agencies, **some informal rules apply**: such operations must not be executed in friendly countries, there should be no links between the operatives and diplomatic missions, and finally they don't get caught.

WHAT IS ARTIFICIAL GENERAL INTELLIGENCE (AGI)?



Why in News? Recently, Sam Altman (OpenAI's CEO) expressed his commitment to invest towards Artificial General Intelligence's (AGI) development.

What is AGI? AGI is a machine that aims to emulate human cognitive abilities to perform any intellectual task that a human can do like reasoning, common sense, abstract thinking, background knowledge etc.

Difference between AGI and AI Being Used (Narrow AI)-Scope of Narrow AI remains limited to set parameters as it can perform only specific tasks like image recognition, translation, playing games etc. But AGI envisions a broader, more generalized form of intelligence, not confined to any particular task (like humans).

Is this a New Idea? No, it was first introduced by Alan Turing (Father of Computer Science and Artificial Intelligence) in 1950 in his paper 'Computing Machinery and Intelligence' where he introduced Turing test, a benchmark for machine intelligence according to which if a machine (without being detected) engages in a conversation with humans, it has human intelligence.

Benefits-It will add productivity and economic value through its unprecedented problem-solving capabilities and creative expression like in healthcare, it can redefine diagnostics, treatment planning, and personalized medicine by integrating and analyzing vast datasets. In businesses, it could automate various processes and enhance overall decision-making, offering real-time analytics and market predictions with accuracy.

Concerns-AGI can:

1. Affect environment by high energy consumption and generating e-waste.
2. lead to employment loss and widespread socio-economic disparity, where power would be concentrated with ones controlling AGI.
3. introduce new security vulnerabilities.
4. outrun the ability of governments and international bodies to introduce suitable regulations.
5. lead to loss of basic human skills and capabilities due to dependence on AGI.
6. outpace human beings and act against them if humans lose its control.

WHAT IS LAKSHYA AIRCRAFT?



Aeronautical Development Establishment, a Bengaluru-based DRDO lab that developed the Lakshya aircraft, has been visited by the Central Bureau of Investigation (CBI).

- It is an indigenously developed **micro-light** and **pilot-less target aircraft**. It designed and **built by the Aeronautical Development Establishment (ADE)**, a subsidiary of the Defence Research and Development Organization (**DRDO**), for the Indian Armed Forces.
- The Lakshya was inducted into the Indian Air Force, Indian Navy, and Indian Army in 2000, 2001, and 2003, respectively. It is a **cost-effective re-usable high subsonic aerial target system** powered by a **gas turbine engine**.
- The **engine is designed** and manufactured by **Hindustan Aeronautics Limited (HAL)** in Bangalore. It is **required for** evaluation and development **trials of new surface-to-air and air-to-air weapon systems**.
- It carries **two tow targets** of tow lengths of 1.5 km each, **having radar, IR or visual signature augmentation, and a Miss Distance Indication Scoring System**.
- These tow targets are **used for training of land- or ship-based gun and missile crew and combat aircraft pilots in weapon engagement**.
- It was designed to **launch either from land or sea** through a zero-length launcher and be **recovered by a dual stage parachute system**.
- The Lakshya can be **controlled from the ground control station (GCS)** through pre-programmed hardware and software systems.
- Designed to be **reused for 15 missions**, the aircraft can spiflicate airborne incoming enemy targets.

WHAT IS THE INTEGRATED PENSIONERS' PORTAL (IPP)?

The government's Department of Pension & Pensioners' Welfare recently started the Integrated Pensioners' Portal in collaboration with Bank of India.



Integrated Pensioners' Portal is specifically designed to ensure **complete digitization of the pension processing and payment system.**

- It combines the **pension processing** and payment services of **five banks** (Bank of India, State Bank of India, Bank of Baroda, Punjab National Bank, and Canara Bank) into a **single window.**
 - **Most pension-disbursing banks will be integrated** with the portal later.
- Its primary objective is to achieve transparency and efficiency in pension-related services. With this system, the **pensioner's personal and service particulars can be captured**, which enables the **online submission of pension forms.**
- **Retirees will also be notified of the progress of their pension sanction through SMS or email**, keeping them informed throughout the process.
- A major feature of the IPP is that **retirees can access their monthly pension slips, check the status of life certificates, submit Form 16, and view statements of arrears paid.**
- The portal **has a Bhavishya platform and a Centralised Pension Grievances Redress and Monitoring System (CPENGRAMS).**

Bhavishya platform:

- It is an **online Pension Sanction & Payment Tracking System** launched by the **Department of Pension & Pensioners' Welfare.**
- It provides **online tracking of pension sanction and payment process by the individual as well as the administrative authorities** for all actions preparatory to grant pension and other retirement benefits, as well as payment of monthly pension after retirement.
- The system **captures the pensioners personal and service particulars.** The forms for processing pensions can **be submitted online.**

- It keeps retiring employees informed of the progress of the pension sanction process through SMS/ Email. The system obviates delays in the payment of pensions by ensuring complete transparency and establishing accountability in the pension sanction and payment process.
- The system obviates delays in the payment of pensions by ensuring complete transparency.

CPENGRAMS:

- CPENGRAMS is an online web-enabled system for speedy redressal of grievances related to pension by various Central Government Ministries/ Departments/Organizations.
- This system, besides providing a faster access to pensioners, offers the following online facilities:
 - Registration of pension grievances online
 - Forwarding of reminders on line
 - Query on the status of any of the registered grievances
 - Available (24*7) basis for submission of grievance online
- It has been developed with the objective of speedy redress and effective monitoring of the grievances besides providing fast access to pensioners.
- Pensioners can also appeal if they are not satisfied with the redressal of their grievance.

GOODS AND SERVICES TAX APPELLATE TRIBUNAL



The Centre has appointed a new President of the Goods & Services Tax Appellate Tribunal (GSTAT).

- It represents a specialised authority formed to resolve GST-related disputes at the appellate level.
- It is established under the Central Goods and Services Tax Act, 2017 (CGST Act) to hear various appeals under the said Act and the respective State/UT GST Acts.

- It will have one **Principal Bench located at Delhi** and 31 State benches located at various locations across States.
- **Composition**
 - It consists of the **President (Head)**, a **Judicial Member**, and **2 Technical Members** (one from the state and another from the Centre).
 - Further, there may be state benches consisting of two Judicial Members, a Technical Member (Centre) and a Technical Member (state).
- **Eligibility**
 - The **president** must be a Supreme Court judge or have served the High Court as the Chief Justice.
 - The **Judicial member** must be a High Court Judge or has served as an Additional District Judge or a District Judge for a period of 10 years.
 - The **Technical Member (Centre)** must be an **Indian Revenue Service** member belonging to Group A or must be a member of All India Service with three years of experience in administering GST in the Central Government.
 - Also, the Technical Member from the Centre should have completed twenty-five years in Group A services.
 - The Technical Member (state) must be a state government officer or All India Service officer with the **rank above Additional Commissioner** of Value Added Tax; also, the rank should be above the First Appellate Authority.
 - The Technical Member from the state must have completed twenty-five years in Group A Services or equivalent and three years administering GST or finance and taxation in the State Government.
 - **Age limit and Tenure:** The president and judicial and technical members of GSTAT shall hold office for **four years**, or until he attains the age of 70 years and 67 years.
- It is equivalent to a **Civil Court for trying a case**. It can pass orders, hear cases, impose penalties, and revoke or cancel registrations.

BLUE CORNER NOTICE



The Central Bureau of Investigation (CBI) is likely to issue a Blue Corner notice against a person who fled abroad after allegations of sexual abuse.

- It is a part of Interpol's elaborate system of colour-coded notices, which enable countries to "share alerts and requests for information [on wanted persons/crimes] worldwide".
- This sharing of critical crime-related information is crucial for tackling internationally spread out criminal activities.
- There are **seven types of notices** — Red Notice, Yellow Notice, Blue Notice, Black Notice, Green Notice, Orange Notice, and Purple Notice. Each has a different implication.
 - **Red Notice:** To seek the location and arrest of persons wanted for prosecution or to serve a sentence.
 - **Yellow Notice:** To help locate **missing persons, often minors**, or to help identify persons who are unable to identify themselves.
 - **Blue Notice:** To collect additional information about a **person's identity, location or activities** in relation to a criminal investigation.
 - **Black Notice:** To seek information on **unidentified bodies**.
 - **Green Notice:** To **provide warning** about a person's criminal activities, where the person is considered to be a possible threat to public safety.
 - **Orange Notice:** To **warn of an event**, a person, an object or a process representing a serious and imminent threat to public safety.
 - **Purple Notice:** To seek or provide information on modus operandi, **objects, devices and concealment** methods used by criminals.
- These notices are issued by the Interpol's General Secretariat at the request of a member country's Interpol National Central Bureau, and are made available for all member countries.

INDIA – NEPAL BORDER DISPUTE

Recent Dispute Between the Two Countries:

- Earlier in 2020, Defence Minister of India Shri Rajnath Singh had inaugurated a new link road from India to China to shorten the travel time for pilgrims to Kailash Mansarovar via Lipulekh pass.
- The road starts from Dharchula in Uttarakhand to Lipulekh pass.
- Nepal had protested strongly against this move by India and claimed that it is a breach of agreement reached between the Prime Ministers of India and Nepal in 2014 to work out on the outstanding boundary issues on Kalapani and Susta (West Champaran, Bihar).
- In response, a **Constitutional Amendment Bill** was passed by Nepal’s parliament to **legitimize the alteration to the country’s map with the addition of Kalapani, Lipulekh and Limpiyadhura.**
- The passage of the Bill and the new map led to a temporary breakdown of communication between the two countries.

Indian territories on the currency notes of Nepal:

- The **Government of Nepal has decided to come out with a Rs-100 currency note that depicts the country’s map with areas such as Lipulekh, Kalapani and Limpiyadhura which are under Indian control.**
- The decision on the new currency note, was taken at a meeting of the cabinet chaired by Prime Minister Pushpa Kamal Dahal ‘Prachanda’.
- Nepal’s decision drew a sharp response from India with External Affairs Minister S Jaishankar saying that **Nepal’s move will not change the situation or the reality on the ground.**
- This decision of the Nepal Government has not received full support from the local political stakeholders.
 - Some former diplomats and former Governors of the Nepal central bank have called it “unwise” and “provocative”.