

**09– 06 – 2023**

**News:** ‘Chandrayaan3 to be launched in mid July’

- Indian Space Research Organisation (ISRO) chairman S. Somnath on Thursday said that the space agency was planning to launch the Chandrayaan3 moon mission in mid July.

## **Chandrayaan 3**

- The Chandrayaan-3 mission is a **follow-up of Chandrayaan-2 of July 2019,** which **aimed to land a rover on the lunar South Pole.**
- The **subsequent failure of the Vikram lander led to the pursuit of another mission to demonstrate the landing capabilities needed for the Lunar Polar Exploration Mission proposed in partnership with Japan for 2024.**
- It will have an **orbiter and a landing module.** However, this **orbiter won't be loaded with scientific instruments** like the Chandrayaan-2.
- Its **job will only be confined to carry the lander to the moon, oversee the landing from its orbit and communicate between the lander and the earth station.**

## Chandrayaan-2 Mission

- Chandrayaan-2 consisted of an Orbiter, Lander and Rover, all equipped with scientific instruments to study the moon.
- The Orbiter would watch the moon from a 100-km orbit, while the Lander and Rover modules were to be separated to make a soft landing on the moon's surface.
- ISRO had named the Lander module as Vikram, after Vikram Sarabhai, the pioneer of India's space programme, and the Rover module as Pragyaan, meaning wisdom.
- It was sent aboard the country's most powerful geosynchronous launch vehicle, the GSLV-Mk 3.
- However, lander Vikram, instead of a controlled landing, ended up crash-landing and prevented rover Pragyaan from successfully travelling on the surface of the moon.

**News:** DRDO successfully tests ballistic missile ‘Agni Prime’

- The new generation ballistic missile ‘Agni Prime’ was successfully flighttested by Defence Research and Development Organisation (DRDO) from Dr. A.P.J. Abdul Kalam Island off Odisha on Wednesday night.

## **Agni Prime**

- Agni Prime also called as Agni P is a new generation advanced variant of Agni class of Medium Range Ballistic Missiles (MRBM).
- It is a canisterised missile with range capability between 1,000 and 2,000 kms.
- It was test fired on 28<sup>th</sup> June 2021 from the Abdul Kalam Island off the Chandipur coast, Balasore, Odisha. Recently, on June 2023, the first successful night trial of Agni Prime was conducted.
- The missile followed text book trajectory, meeting all mission objectives with high level of accuracy.
- The ballistic missile weighs 50% less than Agni 3 and has new guidance and a new generation of propulsion.
- Since the missile is canisterised, it can be launched from rail and road and stored for a longer period and transported all across the country as per operational requirements.

- Canisterisation of missiles **reduces the time required to launch the missile** while improving its storage and mobility.
- Once inducted, **these missiles will be the mainstay of the Arihant class** of indigenous ballistic missile nuclear submarines (SSBN) and will give India the stand-off **capability to launch nuclear weapons submerged in Indian waters.**

<b>Name</b>	<b>Type</b>	<b>Range</b>
Agni – I	Medium Range Ballistic Missile	700-1200km
Agni – II	Medium Range Ballistic Missile	2000-3000km
Agni – III	Intermediate Range Ballistic Missile	3000-5000km
Agni-IV	Intermediate Range Ballistic Missile	3500-4000km
Agni – V	Inter Continental Range Ballistic Missile	5000-8000km
Agni – VI	Inter Continental Range Ballistic Missile	11000-12000km
Agni P(rime)	Medium Range Ballistic Missile	1000-2000km