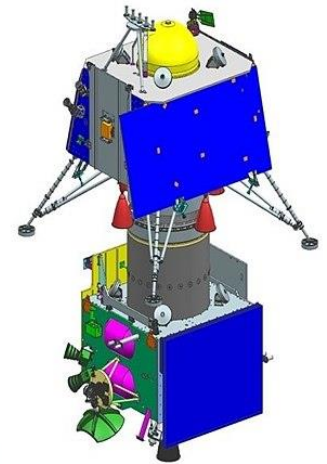


CHANDRAYAAN-2

Prelims- Science & Technology- Space technology ST3

Mains- GS3 - Awareness in the fields of IT, Space, Computers, Robotics, Nano-Technology, Bio-Technology and issues relating to Intellectual Property Rights.

- ✚ Developed by the Indian Space Research Organisation (ISRO)
- ✚ Advanced version of the previous Chandrayaan-1 mission to Moon.
- ✚ mission is planned to be launched to the Moon by a **Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk III)**
- ✚ Two-module system comprising of an Orbiter Craft module (OC) and a Lander Craft module (LC) carrying the Rover developed by ISRO.



Objectives:

- ✚ The primary objectives of Chandrayaan-2 are to demonstrate the ability to soft-land on the lunar surface and operate a robotic rover on the surface.
- ✚ Scientific goals include studies of lunar topography, mineralogy, elemental abundance, the lunar exosphere, and signatures of hydroxyl and water ice.

Other Nations:

- ✚ Only **USA** **Russia** and **China** were able to soft land successfully on the lunar surface and these landings were near the lunar equator.

Recent Developments:

- ✚ A crucial test before the launch called “Lander Sensor Performance Test (LSPT)” was conducted by ISRO over an artificial lunar site setup at Challakere, Karnataka.
- ✚ It is to test how the sensor will guide the lander when it starts descending on the lunar terrain.
- ✚ As the plane descends over the artificial terrain, the sensors must show how they will guide the soft landing of the lunar craft at the right spot, speed and position.

Sensor in the Lander:

- ✚ It helps assess height from the landing spot, decides speed of the lander and helps lander navigate boulder or uneven surfaces.