Information about Chandrayaan 2 – Mission to the Moon | Free Download

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Information about Chandrayaan 2: On 22nd July,2019, Chandrayaan-2 was launched from the Satish Dhawan Space Center in Sriharikota, India. Chandrayaan 2 is an Indian lunar mission that will go the Moon's south polar region. It has used Geosynchronous Satellite Launch Vehicle (GSLV-MK III) rocket. Before this,India has launched Chandrayaan-1 in 2009 that helped confirming the presence of water/hydroxyl on the moon. India has become fourth country to land on the lunar surface after the USA, Russia and China. Chandrayaan-2 consists of total 13 payloads. Out of 13, eight are in the orbiter, three payloads in Vikram and two in Pragyan.

Main Aim of Chandrayaan 2:

Aim of Chandrayaan-II is to widen the scientific objectives of Chandrayaan-1 by way of soft landing on the Moon and deploying a rover to study the lunar surface.

Why Second time:

Space discovery can be easily attempted as the moon is the closest cosmic body. ISRO has stated that Chandrayaan-2 will help understanding of space, stimulate new technology and promote global alliances.

Further, the lunar South Pole larger than North Pole and there is a possibility of the presence of water in permanently shadowed areas around it. Further, the South Pole region contain a fossil record of the early solar system.

Chandrayaan-2 is carrying equipment that is more sensitive to sub-surface water than those Chandrayaan-1 explored the moon.

Important Components:

Chandrayaan-II mission has three important components — the Orbiter, the Lander Vikram and Rover Pragyan. Three-component spacecraft weights 3,850 kg.

Orbiter:

The Orbiter and the Lander will be tucked into the GSLV Mk-III rocket, which will essentially hurl them at the moon. The orbiter will continue revolving around the Moon for one year. It will perform experiments to study the satellite's outer atmosphere. It will orbit the moon at altitude of 100 km, carrying five scientific Instruments.The orbiter has total eight instruments fitted into it and seven of them are India's.

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Vikram :

The lander 'Vikram' has been named after father of Indian space research programme Dr Vikram A Sarabhai. Its mission life is of one lunar days (14 earth days). It can do soft landing of the lunar surface at a velocity of 2 m/s. Lander Vikram will be carrying the rover 'Pragyan'.It will land in a high plain between two craters at a latitude of about 70 degrees South of the Moon.

Rover Pragyan:

It is six wheeled and solar powered robotic vehicle. It can travel up to 0.5 km at a speed of 1cm/sec. Once Vikram lands on the Moon, the rover Pragyaan will roll out on to the lunar surface. Pragyaan will then carry out surface and sub-surface experiments for one lunar day, which is equal to around 14 Earth days.

After the rocket reaches space, the uppermost portion of the rocket, separates and releases its payload. The orbiter-lander module will conduct a series of five complex manoeuvres around the Earth to build up momentum and slingshot itself closer to the moon. The lander will detach itself from the orbiter to make a soft landing on the moon and will then release the rover onto the lunar surface.

Information about Chandrayaan 2 from Exam View:

Launch Date	22 July,2019
Launch from	Satish Dhawan Space Centre (SDSC), Sriharikota
Aim	Demonstrate the ability to soft-land on the lunar surface and operate a robotic rover on the surface.
Rocket type	GSLV-Mk-III
Total Payloads	13 (8 on the orbiter, 3 on lander and 2 on rover)
Cost	Rs 978 Crore
spacecraft weight	3850 kg
orbit from the lunar surface	100 km
Components	the Orbiter, the Lander Vikram and Rover Pragyan.
Duration	One Year
Landing of the Vikram lander on the Moon's surface	September 6, 2019