The Indian Space Research Organisation (ISRO)'s Chandrayaan-3, the third lunar exploration mission, is expected to strengthen India's position in space exploration. Similar to Chandrayaan-2, the mission consists of a lander and the Pragyan rover, but it does not have an orbiter. Up until the spacecraft reaches a 100 km lunar orbit, the propulsion module acts as a communication relay satellite and carries the lander and rover configuration.

The first phase of the Chandrayaan-3 mission was launched on July 14, 2023, at 2:35 PM IST. It was launched on July 14th, 2023, by LVM3 from SDSC SHAR, Sriharikota. The successful placement of the spacecraft into a 100 km circumpolar circular orbit. On August 23, 2023, the lander and rover are anticipated to softly land in the vicinity of the lunar south pole.

The second phase of the Chandrayaan program, which included the Chandrayaan-2 mission, is followed by Chandrayaan-3. An orbiter, a lander, and the Pragyan rover made up Chandrayaan-2. In order to deploy the rover, the lander was supposed to touch down on the lunar surface in September 2019. Despite the lander's failed landing attempt, ISRO is still dedicated to showcasing soft landing capabilities for upcoming lunar missions.

Goals of Chandrayaan 3 mission

Three primary goals have been established by ISRO for the Chandrayaan-3 mission. The first goal is to achieve a soft and safe lunar surface landing. It also aims to show off the rover's flexibility on the lunar surface. The mission's final objective is to conduct in-situ scientific observations of the Moon's natural and chemical components, including its soil, water, and other elements.

India's space programme has advanced significantly with Chandrayaan-3, showcasing the country's technological prowess. The mission is well-positioned to offer important new information about the make-up of the lunar surface, the existence of water ice, the history of lunar impacts, and the development of the Moon's atmosphere.

Chandrayaan-3's successful launch represents a significant turning point in India's ascent to space exploration. The mission is anticipated to significantly contribute to our understanding of the Moon's composition and advance our scientific understanding of Earth's satellite as ISRO continues to make strides in lunar exploration.

Conclusion

An important development for India's space exploration programme is Chandrayaan-3. The success of Chandrayaan extends beyond scientific breakthroughs to include advantages for the nation's socioeconomic system. Additionally, it will encourage and inspire the next generation to become interested in science and technology.