

GISAT-1 mission

April 24, 2020

Context: ISRO is planning to launch Geo Imaging Satellite (GISAT-1)

- Geosynchronous Satellite Launch Vehicle (GSLV-F10) will launch Geo Imaging Satellite (GISAT-1)
- Weighing about 2268 kg, GISAT-1 is an Earth observation satellite which will be placed in a Geosynchronous Transfer Orbit by GSLV-F10. Subsequently, the satellite will reach the final geostationary orbit using its onboard propulsion system.
- Operating from geostationary orbit, GISAT-1 will facilitate near real time observation of the Indian subcontinent, under cloud free condition, at frequent intervals.
- Scientists at ISRO for the first time designed the Geo-Stationary Launch Vehicle with a four-metre diameter ogive shaped payload fairing (which houses the satellite) to accommodate a larger spacecraft.
- Though India already has a number of earth observation satellites, these generally operate from low earth orbits covering a relatively smaller region at a given time.
- Since sectors like meteorology and disaster management require imaging large areas of earth and atmosphere very frequently, GISAT-1 was planned to be put in the geostationary orbit for seamless observation of land, ocean and atmospheric parameters at a relatively higher resolution.