GSAT-30 Satellite

Syllabus subtopic: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Prelims and Mains focus: About the GSAT-30 satellite and its applications

Context: India’s latest communication satellite GSAT-30 was successfully launched from the Spaceport in French Guiana during the early hours today. The launch vehicle Ariane 5 VA-251 lifted off from Kourou Launch Base, French Guiana at 2:35 am IST carrying India’s GSAT-30 and EUTELSAT KONNECT for Eutelsat, as scheduled.

After a flight lasting 38 minutes 25 seconds, GSAT-30 separated from the Ariane 5 upper stage in an elliptical Geosynchronous Transfer Orbit.

About GSAT-30 Communication satellite

- GSAT-30 derives its heritage from ISRO’s earlier INSAT/GSAT satellite series and will replace INSAT-4A in orbit.

- With a lift-off mass of 3357 kg, GSAT-30 will provide continuity to operational services on some of the in-orbit satellites.

- After a flight lasting 38 minutes 25 seconds, GSAT-30 separated from the Ariane 5 upper stage in an elliptical Geosynchronous Transfer Orbit.
• GSAT-30 has a unique configuration of **providing flexible frequency segments and flexible coverage.**

• The satellite will provide communication services to Indian mainland and islands through **Ku-band** and wide coverage covering Gulf countries, a large number of Asian countries and Australia through C-band.

• GSAT-30 will provide DTH Television Services, connectivity to VSATs for ATM, Stock-exchange, Television uplinking and Teleport Services, Digital Satellite News Gathering (DSNG) and e-governance applications.

• The satellite will also be used for bulk data transfer for a host of emerging telecommunication applications.

**What next?**

In the days ahead, orbit-raising manoeuvres will be performed to place the satellite in **Geostationary Orbit (36,000 km above the equator)** by using its onboard propulsion system. During the final stages of its orbit raising operations, the two solar arrays and the antenna reflectors of GSAT-30 will be deployed. Following this, the satellite will be put in its final orbital configuration. The satellite will be operational after the successful completion of all in-orbit tests.