

CMS-01 Satellite

On December 17, 2020, the Indian Space Research Organization (ISRO) successfully launched India's 42nd communications satellite from Space centre located at the Sriharikota island.

The Satellite was carried by the PSLV-V rocket. It was also the 52nd successful launch of the PSLV from the Sriharikota spaceport.

This article will provide further details about CMS-01 Satellite within the context of the Civil Services Examination.

Brief Facts about the CMS-01 Satellite

The CMS-01 satellite is a communications satellite launched with the intention of replacing the aging GSAT-12 satellite launched in 2011. It will also provide extended-C band of the frequency spectrum which will improve services like tele-education, tele-medicine, disaster management support and satellite Internet access.

According to ISRO, the coverage provided by the satellite will cover the Indian mainland as well as the outlying islands of Lakshadweep and the Andaman and Nicobar Islands.

More facts about the CMS-01 Satellite is provided in the table below:

Facts about CMS-01 Satellite	
Mission Type	Communications
Mission Duration	7 Years
Launch Mass	1425 Kg
Power	1500 watts
Band	Extended C-band
Coverage	Indian mainland, Andaman and Nicobar Islands and Lakshadweep Islands
Reference System	Geocentric orbit

Significance of the CMS-01 Launch

Other than the fact that the CMS-01 satellite will help in boosting communications across India, the launch of the satellite also shows that the Indian space programme is back on track as the COVID-19 pandemic had thrown launch schedules off-gear.

Before the CMS-01, ISRO has launched the Earth Observation Satellite - I (EOS-1) and nine other smaller satellites since its personnel returned to active duty at the Sriharikota space drome in November 2020.

The Gaganyaan mission, a human spaceflight project, has also suffered from the impacts of the COVID-19 pandemic. Certain stages of the project such as uncrewed launches using robots are expected to be launched in late 2021 according to ISRO chairman K Sivan.

UPSC Questions related to the CMS-01 Satellite.

How was the CMS-01 satellite inserted into high orbit?

CMS-01 was inserted into the higher orbit with an apogee (farthest distance from earth) of almost 42,164 km, before it settled into its final geostationary orbit of 35,000km and 83 degrees inclination

Following the launch of CMS-01 what are other satellite launch programs scheduled in the coming years?

Other Indian satellites ready for launch are GISAT and Microsat-2A. The launch of the GISAT-1 satellite was planned for March 5, 2020 , but was postponed due to technical reasons a day before the launch.

What is the significance of the PSLV- C51 Launch?

The mission will be significant for ISRO as well as India as the PSLV-C51 rocket will carry the first satellite from a startup named Pixxel India. The satellite will be called Anand and be part of the planned Firefly fleet of Earth observation satellites