

LVM3 (Launch Vehicle Mark-3)

Prelims: Current events of national and international importance | Science and Technology

Why in News?

India's biggest launch vehicle, LVM3, is put into orbit the communication satellite CMS-03 recently.

- **Agency** It is India's most powerful launch vehicle, developed by the Indian Space Research Organisation (ISRO).
- It also known as GSLV Mk III or Launch Vehicle Mark-3 (LVM3).
- Weight -4,410 kg (1st one weighing over 4,000 kg).
- Orbit geosynchronous transfer orbit
- **Stage** 3 stages.
- **Propellant** Two solid propellant S200 strap-ons.
- **Height** ~43.5 meters
- Lift-off Mass ~640 tonnes
- Payload Capacity (LEO) Up to 8,000 kg.
- Payload Capacity (GTO) Up to 4,000 kg.
- **Stages** 3.
- **Configuration** 2 solid strap-on boosters + 1 liquid core stage + 1 cryogenic upper stage.
- Notable Missions
 - **GSLV Mk III-D1 (2017**) First successful orbital flight launched GSAT-19.
 - GSLV Mk III-M1 (2019) Chandrayaan-2 lunar mission.
 - LVM3-M2 (2022) Launched 36 OneWeb satellites (India's first commercial heavy-lift mission).
 - LVM3-M3 (2023) Second OneWeb batch.
- **Future Role** LVM3 is the workhorse for India's upcoming human spaceflight program (Gaganyaan) and interplanetary missions, as well as commercial satellite launches.

Reference

The Indian Express | about LVM3

