

GSAT-7R (CMS-03)

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Why in news?

The Indian Space Research Organisation (ISRO) has successfully launched the Indian Navy's advanced communication satellite GSAT-7R (CMS-03) from the Satish Dhawan Space Centre in Sriharikota.

- It is the *indigenously designed & developed*, multi-band communication satellite for Indian Navy.
- **Purpose** It will provide telecommunication coverage across the Indian Ocean region between the Navy's ships, submarines, aircraft, and Maritime Operations Centres.
- Operator Indian Navy.

Key Features

- **Weight** About 4,400 kg, India's **heaviest** communication satellite to date launched to GTO from Indian soil.
- Launch vehicle Launch Vehicle Mark 3 (LVM3).
- Orbit Geosynchronous Transfer Orbit (GTO).
- Mission life ~12-15 years.
- **Replacement** GSAT-7R is a replacement and upgrade for the existing GSAT-7 (Rukmini) satellite, which was nearing the end of its operational life.
- Equipped with <u>State-of-the-art indigenous components</u>, carried Kuband, S-band, C-band and ultra-high frequency band transponders capable of supporting voice, data, and video links over multiple communication bands.
- Alings with India's Aatmanirbhar Bharat vision, enabling the armed forces to operate with enhanced situational awareness and secure, highcapacity communication links in complex maritime environments.
- Preparing for Gaganyaan -

- Recent launch showcased the LVM3 rocket's ability to carry satellites over 4 tonnes to GTO, this reduces India's reliance on foreign launchers for heavy communication satellites.
- It also *supports ISRO's Gaganyaan mission* by validating the LVM3 platform, which will be evolved for India's first human spaceflight.

India's previous heavy satellites were the 5,854-kg GSAT 11 & 4,181-kg GSAT-24 were launched by Ariane space & The GSAT-20, 4,700-kg satellite by SpaceX.

References

- 1. The Hindu | ISRO has successfully the GSAT-7R satellite
- 2. ISRO | LVM3-M5/CMS-03 MISSION

