
1. Small Satellite Launch Vehicle (SSLV-D2)

Why in News?

- Recently, the Indian Space Research Organisation (ISRO)'s smallest vehicle, Small Satellite Launch Vehicle (SSLV-D2), was launched from the Satish Dhawan Space Centre, Sriharikota, Andhra Pradesh.

Highlights

- The vehicle's first development flight (SSLV D1) that took place in August 2022 failed to place the satellites in precise orbit.
- This time structural changes have been made to the equipment bay, along with changes in the separation mechanism for stage 2, and logic changes for the on-board system.
- SSLV is a 3 stage Launch Vehicle configured with three Solid Propulsion Stages and Liquid propulsion-based Velocity Trimming Module (VTM) as a terminal.
- It is 2 m in diameter and 34m in length with a lift off weight of 120 tonnes and is capable of launching a 10 to 500 kg satellite in 500 km planar orbit.
- The rocket can be assembled by a small team in only a few days, compared to the 6 months and around 600 people it takes for ISRO's workhorse PSLV.
- It has been developed to capture the emerging small (nano-micro-mini) satellite commercial market, with launches offered on demand.
- It provides low-cost access to Space, offers low turn-around time, facilitates flexibility in accommodating multiple satellites and demands minimal launch infrastructure.