

Vikram Suborbital rocket

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Why is in news? ISRO to launch the first-ever private Rocket from Sriharikota in Andhra Pradesh 18th November, 2022

The Mission Prarambh will carry three customer payloads Space Kidz India, Bazoomq Armenia and N-Space Tech India.

The one stage rocket is equipped with sensors for securing datas including measurement of acceleration and pressure. This mission is a milestone in the history of ISRO.

A non-government entity, the start up Skyroot Aerospace Private limited had developed the single-stage Vikram Suborbital rocket.

Weighing 550 kilogram the rocket will reach a maximum altitude of 101 km and is expected to splash in the sea after an overall duration of 300 seconds post-launch.

The Sky root start-up is planning to send more than 20,000 small satellites in the coming decade.

Vikram series is named after Dr. Vikram Sarabhai, the father of Indian Space Science. The rocket was designed to enable this through unprecedented mass producibility and affordability.

The Vikram series has three rockets – Vikram I, II and III.

They have unique capabilities such as multi-orbit insertion and interplanetary missions.

They can support communication services like broadband internet, GPS, and IoT from space and earth imaging.

It will provide customized, dedicated and ride share options, catering to a wide spectrum of small satellite customer base.

These rockets can be assembled and launched in less than 72 hours, having the lowest cost in the payload segment. They can carry satellites weighing up to 815 kg to the **low Earth orbit and the sun- synchronous polar orbits** (SSPOs).

Significance of Mission Prarambh:

Mission Prarambh (beginning) will mark the first-ever launch of the privately developed rocket from India.

It makes Skyroot company the first startup to enter into a Memorandum of Understanding (MoU) with the Indian Space Research Organization (ISRO) for launching rockets.

It opens the Indian space sector to private companies and provides favourable environment for cost-efficient satellite launch services by removing the entry barriers.

Kamaraj IAS Academy

Plot A P.127, AF block, 6 th street, 11th Main Rd, Shanthi Colony, Anna Nagar, Chennai, Tamil Nadu 600040

Phone: 044 4353 9988 / 98403 94477 / Whatsapp: 09710729833