Everest Engine

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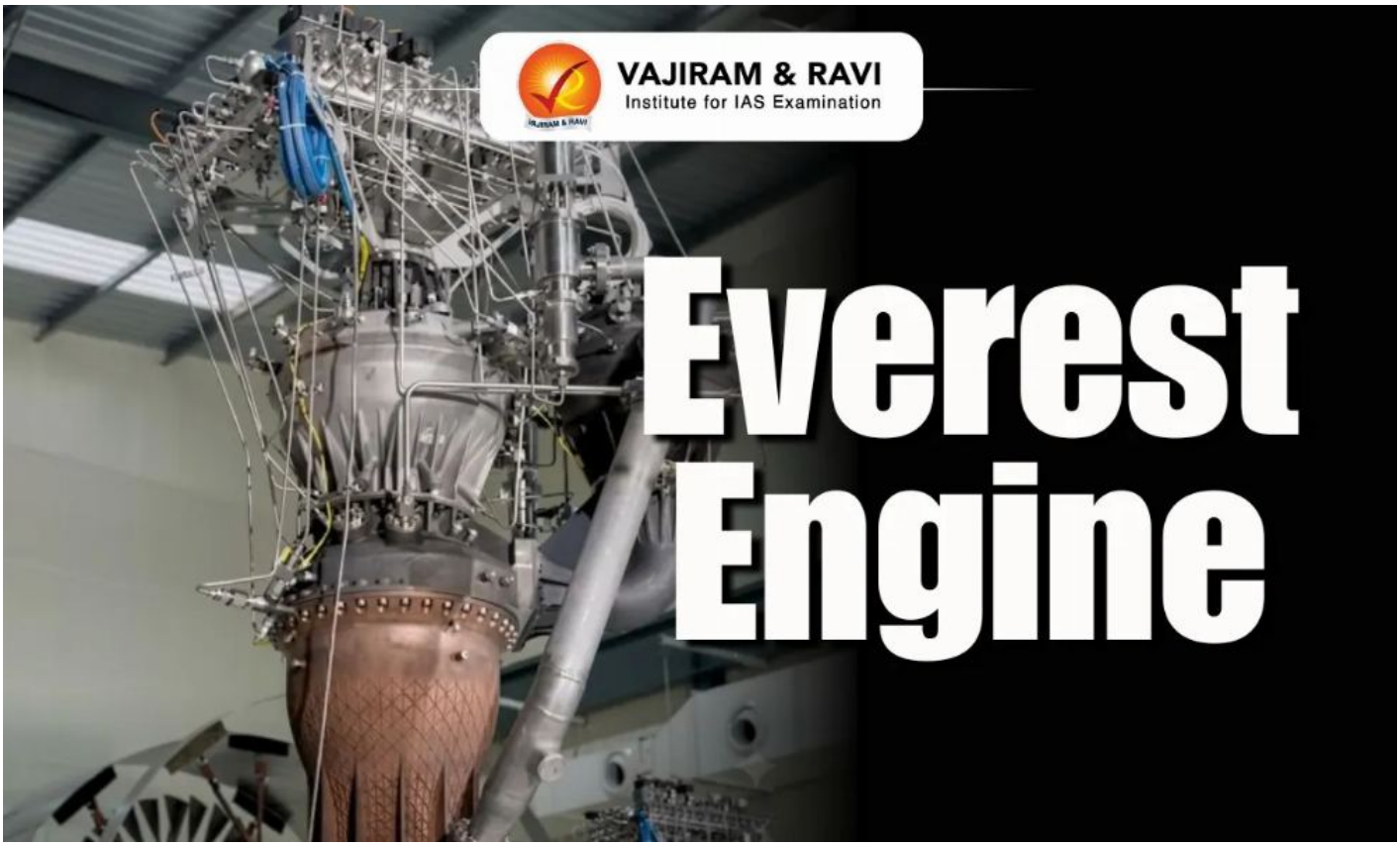

Everest Engine Latest News

Astrobase Space Technologies recently unveiled Everest, an 800 kN Full-Flow Staged Combustion rocket engine, as India’s private space sector targets reusable, high-cadence orbital launches.

About Everest Engine

- It is an **800 kN Full-Flow Staged Combustion (FFSC) rocket engine**.
- It was developed by **Astrobase Space Technologies,** a Bengaluru-based Indian space-tech startup.
- It is **India’s first privately developed high-thrust FFSC engine.**
- It is designed for **reusable medium-lift launch vehicles,** supporting precision control, faster turnaround, and improved launch economics.
- It is **powered by liquid oxygen** and **liquid methane**, a combination known as **methalox**, and is designed to produce about **800 kilonewtons of thrust in the vacuum** of space.

What Is Full-Flow Combustion?

- I**n a conventional rocket engine**, some of the **hot gases produced during combustion** are used to **power the turbopumps that push fuel and oxidiser** into the **main combustion chamber.**
- A **full-flow engine** takes this a step further.
    - **Both the fuel and oxygen** are first **partially burned in separate pre-burners, producing hot gases** that **drive their respective pumps before both flows enter the main combustion chamber.**
    - This allows the **engine** to **operate efficiently at very high pressure** while **reducing stress on some components.**
    - The design is widely considered among the most advanced approaches to rocket propulsion.
- **SpaceX** is currently the **only company** to have **flown an FFSC engine** in an orbital rocket.

News: FP
