

First test flight of SpaceX's big Starship

April 17, 2023

In news– SpaceX is planning to launch the first orbital test mission of its huge Starship vehicle on April 17 2023.

About Starship-

- Starship is a super heavy-lift launch vehicle developed by SpaceX.
- Standing at 119 m tall, it is designed to be the **tallest and most powerful launch vehicle** ever built, and the first intended to be **fully reusable**.
- The Starship launch vehicle is made up of the **first-stage booster and the Starship second stage**.
- The **second stage functions as a self-contained spacecraft for carrying crew** or cargo once in orbit.
- **Both stages are powered by Raptor engines that burn liquid oxygen and liquid methane propellants** in a highly efficient full-flow staged combustion power cycle.
- Both rocket stages are designed to be reused by landing vertically at the launch pad.
- It is designed to send astronauts to the Moon and Mars and beyond.
- It is designed to be fully and rapidly reusable.
- The U.S. space agency NASA has picked the Starship spacecraft to ferry astronauts to the Moon in late 2025 – a mission known as Artemis III – for the first time since the Apollo program ended in 1972.
- Starship consists of a 164-foot (50-meter) tall spacecraft designed to carry crew and cargo that sits atop a 230-foot tall first-stage Super Heavy booster rocket.
- Collectively referred to as Starship, the spacecraft and the Super Heavy rocket have never flown in combination

together, although there have been several sub-orbital test flights of the spacecraft alone.

- Starship, which has six engines of its own, will continue to an altitude of nearly 150 miles, completing a near-circle of the Earth before splashing down in the Pacific Ocean about 90 minutes after launch.
- It generates 17 million pounds of thrust, more than twice of that of the Saturn V rockets used to send Apollo astronauts to the Moon.

SpaceX's Starship rocket system

