



## Successful Flight Testing of Crew Escape System

ISRO carried out a major technology demonstration, the first in a series of tests to qualify a Crew Escape System, which is a critical technology relevant for human spaceflight. A human space programme focuses on taking a human to space and bringing him back to the Earth safely.

### Key Points

- Only three countries- the USA, Russia and China, have human space flight programmes.
- The only Indian citizen to ever travel to space was fighter pilot Rakesh Sharma who flew aboard Soyuz T-11, a spacecraft of the former USSR in 1984.
- India does not have a human spaceflight programme. However, critical technology developments and demonstration for indigenous human spaceflight capability is in progress. The crew module systems, space suit, recovery systems, crew escape systems and elements of environmental control and life support systems are already developed.

### Crew Escape System

- The Crew Escape System is an emergency escape measure designed to quickly pull the crew module along with the astronauts to a safe distance from the launch vehicle in the event of a launch abort.
- Crew escape system is a critical technology for human spaceflight.
- The programme will boost India's progress towards manned space missions.

### The Test

- The first test (Pad Abort Test) demonstrated the safe recovery of the crew module in case of any exigency at the launch pad.
- The test was over in 259 seconds, during which the Crew Escape System along with crew module soared skyward, then arced out over the Bay of Bengal and floated back to Earth under its parachutes about 2.9 km from Sriharikota.
- The crew module reached an altitude of nearly 2.7 km under the power of its seven specifically designed quick acting solid motors to take away the crew module to a safe distance without exceeding the safe g-levels.
- Nearly 300 sensors recorded various mission performance parameters during the test flight.