

# Challenger space shuttle disaster

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**In news**– NASA's Kennedy Space Center has recently announced the recovery of debris from the Challenger spaceship that exploded 73 seconds after liftoff killing all seven astronauts aboard 37 years ago.

## What was the Challenger space shuttle disaster?

- **The spacecraft broke apart on January 28, 1986 after it suffered a major malfunction** less than 2 minutes into its flight with investigations revealing freezing temperatures having affected the integrity of O-ring seals in the solid rocket booster segment joints.
- **The O-ring seals are used to keep fluids from leaking and components sealed.**
- The last Challenger mission, dubbed STS-51L, was commanded by Francis R "Dick" Scobee and piloted by Michael J Smith.
- The mission was given a go-ahead despite concerns raised by some shuttle program employees. Ice had formed on the shuttle amid freezing temperatures as Challenger remained on the launch pad overnight.
- The shuttle mission, which was NASA's 25th, was supposed to be a six-day mission wherein, the seven-member crew was **to deploy a large communications satellite, deploy and retrieve an astronomy payload** to study Halley's Comet.
- The teacher, also the first civilian to head to space, was to conduct lessons for schoolchildren from orbit.
- **The primary objective of the STS-51L mission was to launch the second Tracking and Data Relay System (TDRS) satellite into orbit.**

## **The Columbia space shuttle accident-**

- Seventeen years later, in 2003, NASA witnessed another catastrophic disaster after Columbia, which was into its 28th and final flight, got lost during the spacecraft's re-entry into Earth's atmosphere on February 1, killing all seven crew members.
- On a 16-day mission launched from Kennedy Space Center in Florida on January 16, Columbia conducted a series of international scientific experiments in orbit.
- After completing STS-107, the space shuttle disintegrated as it reentered the atmosphere over Texas.
- It was the fourth human spaceflight program carried out by NASA, which undertook routine transportation for Earth-to-orbit crew and cargo from 1981 to 2011.
- **India-born Kalpana Chawla and six other astronauts perished in one of the worst US space mishaps.**