

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

LOK SABHA

UNSTARRED QUESTION NO. 396

TO BE ANSWERED ON WEDNESDAY, JULY 24, 2024

PROGRESS OF GAGANYAAN

396. PROF. SOUGATA RAY:

Will the PRIME MINISTER be pleased to state:

- (a) the status of the progress of Gaganyaan;**
- (b) whether the ISRO has selected and trained Astronauts;**
- (c) if so, the details thereof;**
- (d) whether the ISRO has collaboration with any other agencies for the Axiom-4 Mission; and**
- (e) if so, the details thereof?**

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC
GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

(DR. JITENDRA SINGH):

(a) The status of the progress of Gaganyaan programme is as follows.

- i. Human Rated Launch Vehicle: Ground testing of propulsion systems stages, including solid, liquid and**

cryogenic engine, towards human rating of the launch vehicle have been completed.

- ii. Crew Module Escape System: Design & realization of five types of Crew Escape system solid motors completed. Static testing of all five types of solid motors completed. First Test Vehicle mission (TV-D1) for the performance validation of crew escape system (CES) and parachute deployment has been successfully accomplished.**
- iii. Orbital Module Systems: Design of Crew Module and Service Module structure have been completed. Various Parachute Systems have been tested through Integrated Main parachute Air drop Test and Rail Track Rocket Sledge Tests. Ground test programme towards human rating of Crew Module Propulsion System has been completed and Service Module Propulsion System test programme is nearing completion. Characterization of Thermal Protection System has been completed.**
- iv. Gaganyatri Training: Two out of three semesters of the training programme completed. Independent Training Simulator and Static Mockup Simulators realized.**
- v. Major Ground Infrastructure: Critical ground facilities such as Orbital Module Preparation Facility (OMPF), Astronaut Training Facility (ATF) and Oxygen Testing Facility have been operationalized. Realization of Mission Control Centre (MCC) Facilities and establishment of Ground Station Networks are nearing completion.**

vi. **Gaganyaan First uncrewed mission: Solid and Liquid Propulsion Stages of human rated launch vehicle are ready for flight integration. C32 Cryogenic stage is nearing completion. Crew Module and Service Module structure realization completed. Flight integration activities are in progress.**

(b) & (c)

Astronaut Selection Board constituted by ISRO had selected four astronauts from the group of test pilots from the Indian Air Force. All four astronauts have undergone training on spaceflight basic module at Russia. Currently, astronauts are undergoing training at the ISRO's Astronauts Training Facility (ATF) in Bengaluru for Gaganyaan Mission

(d) & (e)

ISRO is pursuing an ISRO-NASA joint mission to International Space Station (ISS) wherein one Gaganyaatri from ISRO will undertake space travel to ISS. This is a collaborative effort of ISRO, NASA and NASA identified private entity i.e. Axiom Space. Recently, ISRO has signed a Space Flight Agreement with Axiom Space for this joint mission to ISS.
