

GOVERNMENT OF INDIA
DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1735

TO BE ANSWERED ON THURSDAY, MARCH 13, 2025

GAGANYAAN SPACE MISSION

1735. SMT. SAGARIKA GHOSE:

Will the PRIME MINISTER be pleased to state:

- (a) the reasons behind the delay in progress of the Gaganyaan crewed space mission;
- (b) total number of man-hours that have been spent on this programme since inception;
- (c) total amount of money that has been spent on the said programme;
- (d) the list of targets achieved till date and the pending targets;
- (e) whether a foreign entity has invested in Indian Space programme; and
- (f) the aim and targets set to be achieved by the Department of Space by 2047?

ANSWER

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

(DR. JITENDRA SINGH):

- a) The major reasons behind the delay in progress of the Gaganyaan crewed space mission:
 - i. Avionics components production was severely affected due to COVID-19 pandemic. Supply chain disruption resulted in irregular supply of raw materials and consequent delay in realisation of hardware. The deliveries were shifted/re-scheduled delaying the programme.
 - ii. Global shortage in the supply of space grade and EEE components.
 - iii. Major design revision in orbital module to contain overall mass within HLVM3 capability.
 - iv. Longer cycle time for the indigenous development of life support system being new technology, since procurement through external route couldn't materialise.
- b) Gaganyaan mission is a national endeavour with complex technologies which involves efforts from various stakeholders. While the exact numbers of man-hours spent is difficult

to determine, the Gaganyaan Programme reflects significant human resource involvement across ISRO centres/units, academic institutions, national agencies and Indian industries.

- c) The total amount that has been spent on Gaganyaan programme is ₹5,174 crore till February, 2025.
- d) Major Targets achieved till date under Gaganyaan Programme are as follows:
- i. Human Rated Launch Module (HLVM3): Test campaign for human rating of HS200 Solid Motor, L110-G Vikas Engine and Cryogenic Engine CE20 has been completed. Major qualification tests of HLVM3 structures have been completed.
 - ii. Crew Escape System (CES): Major qualification tests for solid motors as well as structural elements have been completed. First mission to validate CES (Test Vehicle-TV D1) has been successfully accomplished.
 - iii. Orbital Module (Crew Module & Service Module): Major ground qualification tests on subsystems such as propulsion system (Crew Module / Service Module), parachutes, separation systems and structures have been completed.
 - iv. Ground Facilities: Major infrastructure works related to Orbital Module Preparation Facility, augmentation of the Second Launch Pad and Gaganyaan Mission Control Facility in Launch Complex have been completed.
 - v. 1st Uncrewed Mission (G1): Realisation of flight hardware and subsystems for 1st uncrewed mission (G1) has been completed, and launch campaign activities are in progress.
 - vi. Recently, the scope of Gaganyaan Programme has been enhanced with additional missions including launch of 1st module of Bharatiya Antariksh Station (BAS). Originally, the scope included two uncrewed & one crewed missions. The revised scope includes five uncrewed, two crewed missions & 1st module of BAS.
- e) No foreign entity has invested in Indian Space Programme.
- f) The department has formulated a roadmap for space science exploration missions, integrating multiple domains of developments, towards realizing the goal of Space Vision 2047. Following are the major targets/ aim of the roadmap:
- Launch of 1st module Bharatiya Antariksh Station (BAS) by 2028,
 - Establishment of full BAS by 2035
 - Series of moon missions leading to Indian landing on Moon by 2040
