

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

LOK SABHA

UNSTARRED QUESTION NO. 808

TO BE ANSWERED ON WEDNESDAY, FEBRUARY 07, 2024

SENDING HUMANS TO SPACE

808. DR. MANOJ RAJORIA:

Will the PRIME MINISTER be pleased to state:

- (a) the details of the progress made by the country in its Mission to send humans to space;**
- (b) the details of the future plans of ISRO including the development of human spaceflight capabilities and exploration of deeper space; and**
- (c) the details of the measures the Indian government has taken to promote private sector participation in the space sector?**

ANSWER

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

(DR. JITENDRA SINGH):

- (a) The progress made for Gaganyaan programme is as follows:**

- I. The first Test Vehicle mission (TV-D1) for the validation of crew escape system and parachute deployment has been successfully accomplished.**
- II. Ground testing of propulsion stages, including solid, liquid and cryogenic engine, towards human rating of the launch vehicle have been completed.**
- III. Design of environmental control and life support system is completed. Sub-system realization is in progress. Sub-system level tests are in progress.**
- IV. Gaganyaan First uncrewed mission (G-1): Crew Module and Service Module structure realization completed. Mechanical Interface generation and integration activities are in progress.**
- V. Integrated Air Drop Tests: Crew module structural test and integration activities are in progress for drop tests using IAF Chinook helicopter.**
- VI. Second semester of crew training is completed. Corresponding Physical Fitness and medical evaluation of crew has been completed.**
- VII. Crew module Recovery activities carried out successfully for TV-D1 mission as per procedures finalised during trials.**
- VIII. The human centric systems have been realized through National labs and international collaboration. Qualification is in progress.**

(b) The mandate of Gaganyaan programme is to demonstrate the capability to indigenously carry out human spaceflight to Low earth orbit. In continuation of Gaganyaan programme, ISRO has developed a comprehensive road map for human spaceflight activities. As per the roadmap, ISRO is planning to carry out crewed and uncrewed follow-on missions. The objectives of these mission will be to induct various indigenous technologies such as flight suits, crew seat, viewport and advanced avionics systems.

ISRO is also formulating a proposal to develop and deploy Bharatiya Antariksh Station (BAS) in Low earth orbit. Currently, detailed feasibility studies are underway for the same. These programmes shall pave the way for demonstration of Lunar landing of an Indian by 2040.

(c) The Government of India has taken the following measures to promote private sector participation in the space sector:

- 1. Indian Space Policy 2023 has been released by Gol, where roles and responsibilities of all the stakeholders contributing to the overall Indian space ecosystems defined.**
- 2. Various schemes to encourage and hand hold private sector also announced and implemented by IN-SPACe, i.e. Seed Fund Scheme, Pricing Support Policy, Mentorship support, Design Lab for NGEs, Skill Development in Space Sector,**

ISRO facility utilization support, Technology Transfer to NGEs etc..

- 3. IN-SPACe has signed around 51 MoUs with Non-Government Entities (NGEs) to provide necessary support for realization of space systems and applications envisaged by such NGEs, which is expected to increase the industry participation in manufacturing of launch vehicles and satellites.**
