

GOVERNMENT OF INDIA
DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1414

TO BE ANSWERED ON THURSDAY, JULY 30, 2026

HUMAN SPACEFLIGHT AND INDIGENOUS SPACE TECHNOLOGY

1414. SHRI KESRIDEVSINH JHALA:

Will the PRIME MINISTER be pleased to state:

- (a) the present status of Bharatiya Antariksh Station programme and other indigenous human spaceflight initiatives;
- (b) the progress achieved in development of space docking and other critical technologies required for sustained human spaceflight missions;
- (c) the measures undertaken to strengthen indigenous technological capabilities for future space missions; and
- (d) the manner in which these initiatives would contribute to India's long-term human spaceflight programme?

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC
GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE
(DR. JITENDRA SINGH):**

- (a) The Bharatiya Antariksh Station (BAS) is planned as India's first indigenous space station comprising of five modules, targeted to be established by 2035. In October, 2024,

Union Cabinet approved development and launch of 1st module of BAS (BAS-01) by 2028 as part of revision in scope of Gaganyaan Programme. Baseline Design Review and System Engineering of BAS-01 completed and 31 Nos of baseline design documents released. Expert committee review completed. Design of subsystems have commenced.

- (b) As part of Gaganyaan programme, new developments in the area of Human Rated Launch Vehicle (HLVM3), Orbital Module, Crew Escape System, ground infrastructure establishments, establishment of flight operations and communication network, Crew recovery operations have been carried out. Pre cursor missions TV-D1, IADT-01 and 02 have been accomplished. Activities are in advance stages for 1st Uncrewed mission, G1. Docking systems have been worked out including electrical and mechanical interfaces. The concept demo model of Refuelling mechanism has been successfully demonstrated. Other critical technologies for human spaceflight requirement include flight suit, view port and crew seat. For Gaganyaan missions these have been currently sourced from external parties.
- (c) Major critical technologies for human space programme have been identified including flight suit, view port, crew seat and docking technology. Govt of India has approved the indigenous development of these critical technologies. Design and development of proto hardware is in progress.
- (d) These initiatives will establish the technological foundation for indigenous design and development of the remaining four modules of BAS. It will build self-reliance in critical human spaceflight technologies, thereby fostering innovation and high-technology manufacturing required for human space flight.
