GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 134

TO BE ANSWERED ON THURSDAY, JANUARY 29, 2026

SPACE MISSIONS

134. SHRI ANTHIYUR P. SELVARASU:

Will the PRIME MINISTER be pleased to state:

(a) whether Government has drawn up a detailed roadmap for a five-module space station by 2035, including the launch of first module in 2028;

(b) if so, the details of initiatives supporting the Gaganyaan human space mission targeted for 2027 and the measures to expand the satellite fleet from 57 to nearly 150 within the next three years; and

(c) whether Government has taken steps for upcoming missions such as Chandrayaan-IV and the Venus Orbiter Mission and the manner in which these programmes enhance India's leadership in global space operations?

ANSWER

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

(DR. JITENDRA SINGH):

****

(a) ISRO has worked out overall configuration and roadmap for the Bharatiya Antariksh Station (BAS) comprising of five modules. The overall configuration has been reviewed by the National Level Review Committee. It is targeted to have 1st module by 2028 and fully operational BAS with all five modules by 2035.

(b) For the Gaganyaan programme, ISRO is developing and realising various systems for accomplishing the planned missions. Considering the stringent human rating requirements, extensive testing of propulsion elements, structures of Human-Rated Launch Vehicle (HLVM3), Service Module Propulsion System and Crew Module Propulsion System, parachute-based deceleration system has been completed. The critical Crew Escape System motors have also

been developed and static tests have been completed. In parallel, development of indigenous Environmental Control and Life Support Systems is in progress.

Major infrastructure such as the Orbital Module Preparation Facility, Gaganyaan Control Centre, Crew training facility have been established. Second launch pad modifications have been incorporated.

Precursor missions such as 1st Test Vehicle mission and 1st Integrated Airdrop Test have been successfully accomplished.

Ground tracking networks, terrestrial links and IDRSS-1 feeder stations have been established.

Crew Module Recovery plan as well as assets to be deployed have been finalized.

For the first uncrewed mission, all HLVM3 stages and CES motors are ready. Crew and Service Module systems have been realized. Assembly and integration activities are nearing completion.

Government has taken necessary measures to plan and realise the required number of satellites to meet the societal, commercial and strategic requirements of the country. The Space Sector reforms is one such measure, which allows the Non-Governmental Entities for end-to-end realization of satellite missions, including owning and operating the same. In addition, currently 84 approved satellite missions, which are in various phases of execution, are being realised by ISRO and industry and few more satellites are under consideration for approval. With these measures, the India's satellite fleet is expected to be increased significantly in the next three years.

(c) Yes. Government has taken the necessary steps for realization of Chandrayaan-IV and Venus Orbiter Missions. The approval for both the projects has been accorded by the Government in October 2024. The project teams have been formed and the realization of the projects are in progress.

By developing advanced technologies required for Chandrayaan-IV mission, such as docking of two spacecraft modules in elliptical orbit, sample return, robotic arm for transfer of sample from one spacecraft module to another, the enabling technologies for future lunar missions including those for crewed missions will be demonstrated. This will eventually lead to self-sufficiency in such critical foundational technologies.

In similar lines, considering the renewed interest among the global space community for exploration of Venus, the Venus Orbiter Mission (VOM) provide an unprecedented opportunity to the technologists and scientific community of our country, to further explore and understand the Venusian science considerably well before the global community. Hence missions such as Chandrayaan-IV and VOM are expected to enhance India's leadership in global space domain.

****