O.I.H.

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1256

TO BE ANSWERED ON THURSDAY, AUGUST 01, 2024

ACHIEVEMENTS RELATED TO SPACE PROGRAMMES AND MISSIONS

1256. SHRI MADAN RATHORE:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that India has also played a significant role in space programmes and missions; and

(b) if so, the details of the achievements made by the country during the last five years?

ANSWER

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

(DR. JITENDRA SINGH):

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(a) & (b)

Yes, Sir. India has played a significant role in space programmes and space missions. Over the last five years, the country has achieved notable milestones in the space sector. Some of the major achievements are given below:

- India's second mission to Moon, Chandrayaan-2 was successfully launched on July 22, 2019 on-board GSLV Mk III-M1, first operational flight of this new launch vehicle. Chandrayaan-2 Orbiter is providing valuable science data for the research community.
- The launch of PSLV-C48/ RISAT-2BR1 in December, 2019 marked the 50th launch of PSLV, the workhorse launch vehicle. PSLV-C48/ RISAT-2BR1 is the 75th Launch vehicle mission from SDSC SHAR.

- PSLV-C52 successfully launched EOS-04 satellite (RISAT-1A) in February, 2022 along with two small satellites - a student satellite (INSPIREsat-1) from Indian Institute of Space Science & Technology (IIST) and a technology demonstrator satellite (INS-2TD) from ISRO, which is a precursor to India-Bhutan Joint Satellite (INS-2B).
- 'ISRO System for Safe & Sustainable Operations Management (IS4OM) was dedicated to the nation in July, 2022.
- LVM3 M2/OneWeb India-1 & LVM3 M3/OneWeb India-2 Missions were successfully accomplished in October 2022 & March 2023 respectively. With these launches, LVM3 exemplifies Atmanirbharata and enhances India's competitive edge in the global commercial launch service market.
- PSLV-C54 successfully launched EOS-06 satellite (Oceansat-3) in November, 2022 along with Eight Nano-satellites including INDIA-BHUTAN SAT (INS-2B).
- First successful mission of SSLV-D2 was accomplished in February, 2023 by injecting three satellites into precise orbit.
- Reusable Launch Vehicle Autonomous Landing Experiments (RLV-LEX) were successfully conducted thrice at the Aeronautical Test Range (ATR), Chitradurga, Karnataka during 2023-24.
- GSLV-F12/NVS-01 mission was successfully accomplished in May, 2023. GSLV deployed the NVS-01 navigation satellite, the first of the second-generation satellites envisaged for the Navigation with Indian Constellation (NavIC) service, into a Geosynchronous Transfer Orbit.
- ISRO successfully carried out the first integrated test on an intermediate configuration of the 2000kN Semi-cryogenic Engine in May, 2023 at the newly commissioned semi-cryogenic integrated engine & stage test facility at ISRO Propulsion Complex (IPRC). Further, hot test of the Semi-cryogenic Engine was carried out by a hot-firing for a short duration of 4.5 Seconds in July, 2023.
- **Chandrayaan-3**: LVM3-M4 successfully launched the Chandrayaan-3 Spacecraft on 14th July, 2023. Successfully accomplished safe & soft-landing of Vikram Lander at 'Shiv Shakti' point (Statio Shiv Shakti) & deployment of Pragyaan Rover on the lunar surface on August 23, 2023

- Aditya-L1 was successfully launched in September, 2023 using PSLV-C57. Spacecraft placing at Sun-Earth Lagrangian point (L1) i.e. Halo-Orbit Insertion (HOI) was successfully accomplished on January 6, 2024.
- As part of Gaganyaan programme, new Test Vehicle for testing critical systems was successfully developed and TV-D1 was successfully launched in October, 2023 to demonstrate Crew Escape System (CES). Announcement of Astronaut-Designates (4 Nos.) to the Country and Astronaut wings bestowing were done in February, 2024.
- PSLV-C58/XPOSAT mission was successfully accomplished in January, 2024.
- GSLV F14/ INSAT-3DS mission (fully funded by MoES) was successfully accomplished in February, 2024.
- Successfully carried out the second experimental flight ATV-D03/DFS for the demonstration of Air Breathing Propulsion Technology in July, 2024.
- Space Sector Reforms was announced in 2020 with an objective of enhancing India's share in global space economy. As a result, exponential increase in space start-ups is witnessed. M/s Skyroot Aerospace and M/s Agnikul Cosmos have successfully launched their sub-orbital flights in 2023 & 2024 respectively. Several other start-ups have significantly progressed towards launch vehicle & satellite development and space applications. IN-SPACe, created under Department of Space as part of Space Reforms 2020, has been functioning as a single window agency to promote, regulate & authorize the space activities of Non-Governmental Entities (NGEs).
- Indian Space Policy-2023 was released in April, 2023 as an overarching, composite and dynamic framework to implement the space reform vision approved by the Cabinet.

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