

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

**LOK SABHA
UNSTARRED QUESTION NO. 2903**

TO BE ANSWERED ON WEDNESDAY, AUGUST 03, 2016

MANNED SPACE PROGRAMME

2903. SHRI RAGHAV LAKHANPAL:

Will the PRIME MINISTER be pleased to state:

- (a) the details of advancements in India's space programme during the last two years and details of co-operation and assistance received from other countries during the last two years for "A Manned Space Programme", country-wise; and**
- (b) the response received so far from each country?**

ANSWER

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

(DR. JITENDRA SINGH):

- (a) The major advancements in India's space programme during the last two years include – (i) Insertion of India's Mars Orbiter around the planet Mars, (ii) realisation of indigenous Cryogenic engine & stage and building indigenous capability of launching 2 Ton class satellites, (iii) realisation of space based services for en-route navigation & safety-of-life applications in aviation sector, (iv) completion of Indigenous satellite navigational system-NavIC, (v) placement of a observatory in space**

“ASTROSAT” enabling simultaneous multi-wavelength (from Ultraviolet to X-Ray) observations of stars and galaxies, (vi) deployment of an indigenously built S-Band Unfurlable Antenna (6 meter) in space for satellite based mobile communications, (vii) technology demonstration of reusable launch vehicle, (viii) launching of 20 satellites in a single launch mission.

ISRO has taken up the development of critical technologies as part of pre-project activities for the Manned Space Programme. Major activities identified under Pre-Project are Crew Module (CM) systems, Environmental Control & Life Support System (ECLSS), Flight Suit and Crew Escape System (CES). The Crew module was flight tested in the experimental mission of GSLV MkIII on December 18, 2014 and the re-entry characteristics and the recovery of the Crew Module were successfully demonstrated. The flight suit development has been completed. Development of the ECLSS and the Crew Escape Systems are progressing well and is targeted to be completed in 2016-17.

As of now, Manned Space Programme is not an approved programme. Currently, ISRO is developing critical technologies relevant for human spaceflight for building future capacity. No co-operation or assistance has been sought from any other country during the last two years in this regard.

(b) Does not arise.
