# GOVERNMENT OF INDIA
# SPACE
# LOK SABHA

UNSTARRED QUESTION NO:2905
ANSWERED ON:10.12.2014
MANGALYAN
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**Will the Minister of SPACE be pleased to state:**

(a) the date of launch of ISRO`s Mars Orbiter Mission (Mangalyan) and the date of its successful entry into the Martian orbit;

(b) the date of conceptualizing the mission and the start of work thereon;

(c) the total distance covered by MoM spacecraft and tasks performed so far; and

(d) the tasks to be performed by the MoM during its lifetime?

## Answer

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

(a) ISRO's Mars Orbiter Mission (MOM), popularly known as Mangalyaan, was successfully launched on 5th November 2013 onboard PSLV-C25 from Satish Dhawan Space Centre, Sriharikota. MOM was successfully inserted into Martian Orbit on 24th September 2014.

(b) Since August 2010, ISRO conducted detailed technical and scientific studies for undertaking an Orbiter mission to Mars and Study Report was brought out in June 2011. The work was started after the project was formally approved in August 2012.

(c) The total distance covered by MOM spacecraft is about 650 million Km. After the successful launch of the Mars Orbiter, the tasks performed so far includes −(i) Series of orbit raising manoeuvers to raise the apogee (farthest point to Earth) of the orbiter, (ii) Trans Mars Injection manoeuver conducted on December 01, 2013 to set the course of the spacecraft towards Planet Mars, (iii) Mars Orbit Insertion (MOI) manoeuver carried out by firing the 440 Newton thrust Liquid Engine along with eight smaller liquid engines to place the MOM into an elliptical orbit around planet Mars (iv) Testing and switching on the five scientific instruments on-board Mars Orbiter (v) Taking a few Images of Martian surface by Mars Colour Camera.

(d) The tasks to be performed by MOM include (1) completion of the calibration of scientific instruments (2) operations of the instruments onboard Mars Orbiter during its lifetime and collection of the scientific datasets and (3) analysis of the scientific datasets to study the Mars surface features, constituents of Martian atmosphere like methane, dynamics of upper atmosphere of Mars escape process of water from the planet.