## Launch of Chandrayaan-II

2911. DR. CHANDAN MITRA: Will the PRIME MINISTER be pleased to state:

- (a) whether the Indian Space Research Organisation (ISRO) had given a project to IIT Kanpur in 2009 to develop a rover to be launched with Chandrayaan-II;
- (b) if so, the details thereof along with the present status of the project; the reasons for not receiving the rover from IIT, Kanpur by ISRO; and
- (c) the further action taken by Government in the matter and also to make remaining payment to IIT, Kanpur?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY): (a) No Sir. Indian Space Research Organisation (ISRO) has not given any project to IIT Kanpur to develop a rover to be launched with Chandrayaan-II. However, ISRO has signed two Memorandum of Understanding (MOUs) with IIT-Kanpur in 2009 to develop theoretical software packages related to rover.

- (b) As per the MOUs, IIT-Kanpur was entrusted to develop following theoretical software packages:
  - (i) To develop the kinematic control algorithm for the rover motion on an uneven terrain.
  - (ii) To develop algorithms for computer vision based autonomous navigation system for mobile robots for the lunar rover mission.
- IIT, Kanpur has carried out the design and development of the algorithms, validation of the software and also the simulations trials.

As per MOU no Rover was to be received from IIT, Kanpur. Only deliverable from IIT Kanpur is the algorithm software and its computer simulation results.

(c) ISRO has taken action for evaluating the work carried out by IIT, Kanpur as per the MOU and remaining payment to IIT, Kanpur will be made thereafter.