

launch 4 tonne class of communication satellites to GTO and its first developmental flight is scheduled to take place in the second quarter of 2017. The development of Semicryogenic engine has also been undertaken to further enhance the GTO payload capability of GSLV MkIII to 6 tonnes.

(b) ISRO has proved the level of efficiency in the area of space science through— (i) planning, development and execution of Lunar mission ‘Chandrayaan-1’ and High resolution imaging and Systematic topographic mapping of the Moon; (ii) successful insertion of Mars Orbiter Mission (MOM) around the planet Mars in very first attempt, achieving all planned objectives and continuing the operations of MOM beyond its designed mission life of 6 months; (iii) placing India’s first observatory in space ‘Astrosat’, which enables simultaneous multi-wavelength observations (Ultraviolet to X-Ray) to study Stars and Galaxies; (iv) indigenous development and validation of several new technologies *viz.* autonomy, deep space communication, scientific instruments in space science missions.

Future missions in space science includes (i) second mission to Moon ‘Chandrayaan-2’, consisting of an indigenous Orbiter, Lander and Rover and (ii) mission for solar studies ‘Aditya-L1’ to study the solar corona in different wavebands.

The capability to set up a space station needs capability of lifting heavy payloads into space. While there is no specific plan for space station, ISRO is working towards this capability through launch vehicles using cryogenic and semi-cryogenic engines.

#### **Vacancy of scientists**

2520. SHRI DILIP KUMAR TIRKEY: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that a large number of posts of scientists are lying vacant in the Department which is affecting its work and if so, the reasons therefor; and

(b) whether it is also a fact that several new posts have been sanctioned recently by Government and if so, the details thereof and by what time these posts would be filled?

THE MINISTER OF STATE IN THE DEPARTMENT OF SPACE (DR. JITENDRA SINGH): (a) No, Sir. At present, only 381 posts are lying vacant. The selection processes have been completed and issuing of offers of appointment is in progress. All vacancies are expected to be filled by July, 2017. Since the number of vacancies are not very large, non-availability of resources against these vacancies are not affecting the work in the Department of Space.

(b) No, Sir. No new posts have been sanctioned by the Government to the Department of Space. A proposal for suitably augmenting the manpower, mostly in scientist/engineer category, has been reviewed and recommended by the Space Commission. The proposal is submitted to the Department of Expenditure, Ministry of Finance, for their recommendations, before placing the same for the approval of the Union Cabinet.

#### **Agreements with Israel on space research**

2521. SHRIMATI VIJILA SATHYANANTH: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that several partnerships/agreements have been signed between India and Israel in space research;

(b) if so, the details thereof;

(c) whether it is also a fact that both the countries had collaborated in space research and technology in the past; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE DEPARTMENT OF SPACE (DR. JITENDRA SINGH): (a) Yes, Sir.

(b) The Agreement between the Indian Space Research Organisation (ISRO) and Israel Space Agency (ISA) was signed on October 28, 2002 for cooperation in peaceful uses of outer space. A Memorandum of Understanding (MoU) between ISRO and ISA on a cooperative programme in the areas of ultraviolet astronomy was signed on December 21, 2003.

(c) Yes Sir.

(d) India and Israel pursued cooperation in the areas of microwave remote sensing, ultraviolet astronomy and also formed a Joint Working Group for studying the feasibility of developing an advanced optical camera for remote sensing. An Israel Satellite was launched onboard Indian launch vehicle, under a commercial contract with Antrix Corporation Ltd.

#### **Sector specific groups to review projects**

2522. SHRI KAPIL SIBAL: Will the Minister of STATISTICS AND PROGRAMME IMPLEMENTATION be pleased to state:

(a) whether it is a fact that the Prime Minister has directed to form ten sector specific groups to review pending projects and if so, the details thereof;