

**GOVERNMENT OF INDIA  
SCIENCE AND TECHNOLOGY  
LOK SABHA**

UNSTARRED QUESTION NO:6585  
ANSWERED ON:09.05.2000  
ACHVEMENTS OF SCIENCE AND TECHNOLOGY  
DILIP KUMAR MANSUKHLAL GANDHI;SHRINIWAS DADASAHEB PATIL

**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

- (a) the details of achievements made by the Government from the development of technology particularly in the areas of missile technology, atomic-energy and space since 1950 and during the period of liberalisation starting from 1991;
- (b) the details of efforts made by the Government to encourage scientific research and link it with industry during the said period;
- (c) whether the Government are aware that the benefits got from the liberalisation are not going upto the common man of the country; and
- (d) if so, the steps taken by the Government in this regard?

**Answer**

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) to (d) Information is being collected and will be laid on the table of the House

(a) to (d) The information has been collected from various agencies dealing with the subject matter and is furnished at Annexure.

USQ. No. 6585 dt. 9th May 2000By SHRI SHRINIWAS PATILSHRI DILIPKUMAR MANSUKHLAL GANDHI LOK S.  
UNSTARRED QUESTION NO 6585 REGARDING `ACHVEMENTS OF SCIENCE AND TECHNOLOGY`

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- b) the details of efforts made by the Government to encourage scientific research and link it with industry during the said period;
- c) whether the Government are aware that the benefits got from the liberalisation are not going upto the common man of the country; and
- d) if so, the steps taken by the Government in this regard?

(a) to (d)Information is being collected and will be laid on the table of the House (a) to (d)The information has been collected from various agencies dealing with the subject matter and is furnished at Annexure.. Nil

**ANNEXURE**

(a) & (b) The country has made remarkable technological advancements in the areas of missile technology, atomic energy and space since 1950s. Apart from making India self-reliant in these three critical areas, the scientists in the country have been successful in utilising these technologies with suitable adaptation for improving the quality of life of Indian masses and society, as a whole.

The technological achievements in these three areas have had far reaching effects, not merely in terms of technological advancements. These include capability to design, build, operate and maintain nuclear power plants and conduct peaceful nuclear explosion experiments of 1974 and 1998. India is one of the successful and large-scale producers of radioisotopes and one of few countries with know-how in radiation technology. As far as missile technology is concerned, India has designed and developed modules for propulsion, guidance, control, airframes, aerodynamic studies and power packs. In the Space sector, major technological development has been done for the establishment of operational space systems namely, INSAT and IRS, both of which are extensively used for services in telecommunications, television and radio broadcasting, remote sensing, meteorology and disaster warning systems. Also, India has made advancements in terms of developing indigenous capability for launch vehicles and satellites.

The developments in all the three sectors have been achieved through active participation by Indian industries, academic institutions, national laboratories and research institutions working in similar and allied areas. In addition, a large number of technologies have been developed as spin-offs, some of which have been transferred to industries for commercial application. Commercialization of these technologies cover various areas in the field of agriculture, health, food processing, and rehabilitation aids, to name a few.

The commercialization efforts complement the governmental R&D incentives given to industries from time to time, such as, tax relief

on R&D expenditure, weighted tax deductions on R&D expenditure and sponsored research by industries, five years tax holiday to commercial R&D companies, excise duty and custom duty waivers to Scientific and Industrial Research Organisations (SIROs), and specific measures like price control exemption for domestic R&D based bulk drugs etc. The Government has also launched promotional programmes for industry involvement in R&D programme. These interventions include Programme Aimed at Technological Self Reliance

(PATSER), Home Grown Technology (HGT) programme and Technology Development Fund all administered by Ministry of Science and Technology.

(c) & (d) The technologies developed since 1950s in these three areas as well as in other S&T areas have benefited the common man to a very large extent. Some of these technologies or their spin-offs include modern telecommunication infrastructure connecting remote locations, disaster warning system, and desalination technology for water purification. The Green Revolution leading to self-sufficiency in agriculture and improved varieties of crop plants is a striking example. Other benefits include radiation medical technologies for diagnosis and treatment of various medical conditions such as cancer; preservation of perishable agricultural products by cryogenic methods and isotope treatment also falls under this category. Other examples are immuno- diagnostic tools for diseases such as typhoid, filariasis, hepatitis B and leishmaniasis etc. and development of indigenous blood bags and artificial heart valve.