GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:6624
ANSWERED ON:06.05.2015
D PRINTERS
Lekhi Smt. Meenakashi

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

(a) whether the Government has taken note of use of 3D printers in various sectors internationally and its nascent presence in India;

(b) if so, whether the Government feels that this technology can be used for medical purposes and also for advancing smallscale `Make in India` projects;

(c) if so, the details thereof; and

(d) whether the Government has explored any other avenues where 3D printing can be used innovatively for the benefit of the people and if so, the details thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES (SHRI Y.S. CHOWDARY)

a) Yes Madam. The Government has taken note of use of 3D Printers in various sectors internationally and its presence in India. Indian Institute of Technology (IIT), Mumbai has developed indigenous 3D printing and metal rapid prototyping systems for various applications. One alumni of IIT Mumbai manufactures and exports 3D printers to 45 countries. There are few other technopreneurs that have emerged in this field of manufacturing in the last few years.

(b) & (c): 3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file. 3D printing technology enables design, mass manufacturing and customization of products used in manufacturing process. This will make manufacturing processes more agile, efficient and customized due to its flexibility and the robustness. The 3-D technology can be used for medical purpose to develop complex shaped products and customized implants. Apart from the implants, the technology can also be used in creation of innovative medical devices as per the requirements of surgeons/clinicians. It can certainly boost the "Make in India" campaign of the Government particularly in, the small scale sector. The availability of low-cost 3-D printers is revolutionizing many areas of prototyping as well as low volume production.

(d) The applications of 3D printing have been identified in the field of electronics, automotive, medical, architectural, aerospace, educational, industrial, and others. The Centre of Excellence on Tactile Graphics has been established by the Department of Electronic and information Technology at IIT Delhi to develop 3-D printing techniques and guidelines for creation of molds for production of tactile diagrams using thermoforming. The Department of Heavy Industries (DHI) is in the process of launching a Centre of Excellence at IIT Mumbai with focus on manufacturing technologies for heavy engineering industry. Recognizing the requirements of manufacturing small quantities of specialized components, Department of Science and Technology (DST) has supported a Joint Programme with Research Councils of United Kingdom (RCUK) on Advanced Manufacturing at IIT-Mumbai in partnership with IIT-Indore.