

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO.3108
TO BE ANSWERED ON 14/3/2018**

NANO SCIENCE AND TECHNOLOGY

3108. SHRI RAVNEET SINGH:

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान एवं प्रौद्योगिकी मंत्री be pleased to state:

- (a) the current status of the Institute of Nano Science and Technology, Mohali, Punjab;
- (b) the total amount of money allotted for various researches in the Institute by the Central Government;
- (c) the number of vacant posts that exists in this Institute presently and the way in which the institute has benefited the local population; and
- (d) the number of their patent products that are feasible for commercial purposes presently?

ANSWER

**MINISTER OF SCIENCE AND TECHNOLOGY, MINISTER OF EARTH SCIENCES AND MINISTER OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(DR. HARSH VARDHAN)**

विज्ञान और प्रौद्योगिकी मंत्री, पृथ्वी विज्ञान मंत्री और पर्यावरण, वन एवं जलवायु परिवर्तन मंत्री

(डा. हर्ष वर्धन)

(a) Madam, Institute of Nano Science and Technology (INST), Mohali (Punjab) is an autonomous institution of the Department of Science and Technology (DST), Government of India, set up to boost Research and Development in the field of Nanoscience and Nanotechnology in India. INST started its activities from January, 2013 and the new campus is under construction in the Knowledge City at Sector-81, Mohali, Punjab.

INST is undertaking fundamental and applied research in Nanoscience and Nanotechnology and is also focusing on solving problems of societal relevance. Currently, 37 scientists along with 120 other researchers are working in INST. Since its inception, more than 150 papers have been published from INST. Under its Ph.D. programme, INST has floated 10 Ph.D. courses in association with the Indian Institute of Science Education and Research, Mohali.

(b) The total amount of money allotted by DST for various researches in the Institute are as follows:

Financial Year	Grant-in-Aid(GIA) received				
	(In Rs. Lakhs)				Total
	GIA (Salary)	GIA (General)	GIA (Capital)		
			Equipment etc.	New Building	
2013-14	0.00	0.00	450.00	0.00	450.00
2014-15	272.80	215.00	157.00	0.00	644.80
2015-16	608.72	241.28	150.00	500.00	1500.00
2016-17	1247.87	644.63	1957.50	1500.00	5350.00
2017-18 (Upto 07.03.18)	988.72	460.57	178.87	4000.00	5628.16
Total	3118.11	1561.48	2,893.37	6,000.00	13572.96

(c) Presently, four posts are lying vacant in the Institute of Nano Science and Technology, Mohali. The Institute has benefited the local population by providing opportunity to local students for pursuing research in Nano Science and Technology, developing technologies to address issues such as stubble burning and removal of toxic metals from water and industrial wastes.

(d) The following patent products are being developed for commercial purposes presently:

- 1) Low-cost water purification device for removal of toxic metals like Arsenic, Uranium and Fluoride ion from water.
- 2) Air purification device for harmful pollutant and Volatile Organic Compound (VOC) sequestration: economical and reusable, first-of-its-kind, with customizable filters based on contents of the air pollutants.
- 3) Low-cost Aptasensor for Cardiac Biomarker, Myoglobin for early detection of cardiac arrest.
- 4) Development of low-cost Bolometer for detection of room temperature through sensors.
