Approving of LIGO India

1530. SHRI AVINASH RAI KHANNA: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Government has approved Laser Interferometer Gravitational Wave Observatory (LIGO), India, if so, the details thereof along with purpose and proposed research projects to be undertaken; and

(b) what is the amount of fund allocated for this project?

THE MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY (DR. JITENDRA SINGH): (a) and (b) The Government has given in-principle approval for setting up Laser Interferometer Gravitational Wave Observatory (LIGO) in India. The LIGO India Project will establish a state-of-the-art gravitational wave observatory on the Indian soil in collaboration with the LIGO Laboratory in the U.S. run by Caltech and Massachusetts Institute of Technology. The Project will bring unprecedented opportunities for our scientists and engineers to dig deeper into the realm of gravitational wave and take global leadership in this new astronomical frontier. LIGO-India will also bring considerable opportunities in cutting edge technology for the Indian industry which will be engaged in the construction of eight kilometre long beam tube at ultra-high vacuum on a levelled terrain. The LIGO-India Project will be jointly co-ordinated and executed by three premier Indian lead institutions *viz.*, the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, the Institute for Plasma Research (IPR), Gandhinagar and the Raja Ramanna Centre for Advanced Technology (RRCAT), Indore. Some of the Universities in the Country will also participate in the project. The Twelfth Plan outlay for the project is ₹ 105 crore.

Progress in Big Data Initiative

1531. PROF. M. V. RAJEEV GOWDA: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the progress made on the Big Data Initiative; and

(b) if so, the details thereof and funds allocated and spent therein, if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) and (b) At present, Big Data and Analytics, Data Science, Technology, Research and Applications (DASTRA) Programme was approved as a Pilot Project for two years, *i.e.* 2015-16 and 2016-17. A Detailed Project Report (DPR) for scaling up has also been prepared. During the Financial Year,

2015-16, a total amount of ₹ 14.00 crores was allocated out of which ₹ 5.00 crores have been spent on R&D and applications development in the areas of Hyperspectral Data Analytics, wetland Ecosystem data analytics, Indian Digital Heritage (IDH) data analytics and digital heritage documentations and tools development. Funds have also been spent on 34 number of capacity building and trainings programmes on Big Data Analytics for Graduates, Scholars, Young Academicians and Scientists across the country and also supported 15 national level workshops and conferences on usage of Big Data Analytics in various thematic domains of Science and Technology.

Dearth of science teachers in colleges

1532. SHRI TARUN VIJAY: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the volume of the dearth of science teachers in various colleges;

(b) what are Government plans and the budget allocated for it to encourage innovations in the area of science and technology; and

(c) the details of some of the most remarkable innovations by Indian scientists in last five years?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) to (c) The information is being collected and will be laid on the Table of the House.

Enhacing research capabilities in universities of Gujarat

1533. SHRI AHMED PATEL: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the steps taken to enhance capabilities of researches in the universities and R&D institutions based in Gujarat;

(b) the details of funds allocated and released to various research institutions based in Gujarat in each of past three years; and

(c) the number of research projects entrusted to the said institutions during the said period, year-wise?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) Government has taken several steps to enhance capabilities of researches in the universities and R&D institutions in the country including those based in Gujarat. Researchers working in these institutions in Gujarat have been supported through various competitive Schemes like Core Research