

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION No. 2621
TO BE ANSWERED ON 06/03/2020

PHD COURSE IN QUANTUM TECHNOLOGY

2621. SHRI SANJAY SADASHIV RAO MANDLIK:
SHRI SUDHEER GUPTA:
SHRI SHRIRANG APPA BARNE:
SHRI BIDYUT BARAN MAHATO:
SHRI GAJANAN KIRTIKAR:

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

- (a) whether the Government proposes to set up a National Mission on Quantum Technology and Application;
- (b) if so, the details thereof along with the aims and objectives of the said mission;
- (c) whether the total number of scientists involved in the mission are not adequate at present and if so, the details thereof and the steps taken by the Government to involve young researchers in the field of quantum technology;
- (d) whether the Government is also considering to start PhD course in the quantum technology to increase the availability of scientists; and
- (e) if so, the details thereof and the time by which the said course is likely to start?

ANSWER

MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE
AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES
(DR. HARSH VARDHAN)

स्वास्थ्य और परिवार कल्याण मंत्री, विज्ञान और प्रौद्योगिकी मंत्री और पृथ्वी विज्ञान मंत्री
डॉ. हर्ष वर्धन

(a) & (b): Yes sir. Government announced launching of National Mission on Quantum Technologies and Applications (NM-QTA) Mission in the Financial Bill 2020-2021. Accordingly, Department of Science and Technology (DST) is evolving Detailed Project Report (DPR) on NM-QTA.

Aims of the Mission are:

1. Engineer, industrialize and connect to economic growth and maintain a competitive advantage as a global supplier of quantum devices, components, systems and expertise while continuing to play a leading role in the development of quantum technologies.

2. Continue fundamental research in science and technology needed to support the capabilities of quantum technologies.
3. Nurture in the development of world-class industrial quantum technology workforce and startups.

Objectives of the Mission are:

1. Develop and demonstrate Quantum processors, Quantum Communication and Produce quantum algorithms and new applications, Quantum memory devices & storage, Quantum accelerator, Quantum Simulator.
2. To develop Quantum clock, quantum sensors & imaging devices, design advanced materials for civil and sensitive applications.
3. To enhance high end researchers base and create next generation Human Resource Development (HRD).
4. Strengthening international collaborative research, nurture innovation and start-ups.

(c) Yes sir. The Detailed Project Report (DPR) for NM-QTA is under preparation. However, anticipating the requirement of the number of scientists to be involved under the Mission, Department of Science & Technology (DST) has initiated a programme "Quantum Enabled Science & Technology (QuEST)" to groom young researchers in both experimental and theoretical research in the field of quantum technology.

(d) & (e): Yes sir. Human Resource Development (HRD) is one of the major components of NM-QTA and includes starting of PhD courses on Quantum Technologies in various academic and research institutes across the country. Initiation of PhD courses are scheduled after approval of competent authority to NM-QTA.
