

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.5351  
TO BE ANSWERED ON 28/3/2018**

**CYBER PHYSICAL SYSTEM**

**5351. SHRI TEJ PRATAP SINGH YADAV:  
SHRIMATI ANJU BALA:**

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

- (a) whether the Department of Science and Technology will launch a Mission on Cyber Physical Systems;
- (b) if so, the details thereof;
- (c) whether the Government has planned to invest in research, training and skilling in robotics, digital manufacturing, big data analysis, quantum communication and internet of things, to harness the benefit of emerging new technology;
- (d) if so, the details thereof; and
- (e) the steps taken by the Government for research and development in new frontier cutting edge technologies in the country?

**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) Yes, Madam.
- (b) Cyber Physical Systems (CPS) is a new initiative launched in 2016 to promote and foster R&D in Cyber Physical Systems and related areas like Data Science, Internet of Things, Cyber Security, and Quantum Communication; To develop technologies, prototypes and demonstrate associated applications pertaining to national priorities; To enhance high end researchers base, Human Resource Development in these emerging areas; To establish and strengthen the international collaborative research for cross fertilization of ideas; and To enhance core competencies, capacity building and training to nurture innovation and start-up ecosystem.
- (c) Yes, Madam.
- (d) The Mission on CPS aims at research, technology development in the area of artificial intelligence, Robotics, setting up of advanced manufacturing, big data analytics, quantum communication, Internet of Things (IoT), training and skilling, establishment of dedicated Centre of Excellence to carry out domain specific research, training and capacity building; HRD and Capacity & Training through fellowships and short term training for faculty and to enhance innovation and start-up ecosystem in the country.
- (e) The Government has initiated National Missions on new frontier cutting edge technologies like Quantum Computation, Quantum Communication, Quantum key distribution, Super Computing, Nano Technology, Solar System Development, Cyber Physical Systems, Artificial Intelligence, Machine Learning, Deep Learning, Big Data and Data Science. Some of the Missions are being implemented and some of them are at launching stage.

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