

**GOVERNMENT OF INDIA**  
**MINISTRY OF EDUCATION**  
**DEPARTMENT OF HIGHER EDUCATION**

**LOK SABHA**  
**UNSTARRED QUESTION NO. 2264**  
**TO BE ANSWERED ON 02.08.2021**

**New Emerging Fields of Science**

**2264. SHRI E.T. MOHAMMED BASHEER:**

**Will the Minister of EDUCATION be pleased to state:**

- (a) whether the Government has adopted new emerging fields of science like Quantum Key Distribution, Blockchain, Machine Learning, Artificial Intelligence, IOT, 5G Network, Advanced Energy Materials by Indian Universities in their research curriculum;
- (b) if so, the details and status thereof; and
- (c) the steps taken or proposed to be taken by the Government to meet the need of the upcoming fourth industrial revolution that will lead the national economics into the new fields with the help of science and technology?

**ANSWER**

**MINISTER OF EDUCATION**  
**(SHRI DHARMENDRA PRADHAN)**

**(a) & (b):** As per the Approval Handbook 2021-22 of All India Council for Technical Education (AICTE), all branches of Engineering and Technology shall offer Elective Courses in the emerging/ multidisciplinary areas viz., Artificial Intelligence (AI), Internet of Things (IoT), Block chain, Robotics, Quantum Computing, Data Sciences, Cyber Security, 3D Printing and Design, Augmented Reality/ Virtual Reality (AR/VR) etc. Also, course curriculum of the above 9 (nine) technologies have been prepared and uploaded on the website of AICTE. Many IITs are already offering most of these courses as electives as well as programmes in some of these areas.

**(c):** The following schemes are being implemented to connect with industry to meet the upcoming fourth industrial revolution that will lead the national economics into the new fields with the help of science and technology:

1. Uchchatar Avishkar Yojana(UAY)
2. Research Promotion Scheme (RPS)
3. Modernisation and removal of obsolescence (MODROB)
4. AICTE IDEA (Idea Development, Evaluation & Application) LAB Scheme
5. AICTE ASLAP (Advertisement for various posts for Student Learning Assessment Project) incorporating industry Professionals

To further add to the cause of national AI readiness, a new Program- *AI for All* was launched by Hon'ble Prime Minister on 29.07.2021 which is driven by Central board of Secondary Education (CBSE) in collaboration with Intel India and is available in 11 Indian languages. The aim of the program is to increase public awareness about AI. It is a 4 hour, self-paced, micro-learning programme aimed to help demystify AI for general public.

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