

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 1557
TO BE ANSWERED ON 28.07.2021

AUGMENTED REALITY AND VIRTUAL REALITY TECHNOLOGY

1557. SHRI T.R.V.S. RAMESH:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY

- (a) whether the Government proposes to promote Augmented Reality (AR) and Virtual Reality (VR) Technology in the Electronics and Information Technology sectors and if so, the details thereof;
- (b) whether AR and VR Technology is helpful in generating awareness about the various concept related issue in the said sectors and if so, the details thereof
- (c) whether the Government has collaborated with any agency (ies) or any other entity for the introduction of this innovative technology in the fields of IT and Electronics and if so, the details thereof;
- (d) whether the Government has developed any infrastructure for imparting education and training of this technology aimed at the appropriate target group (s) and if so, the details thereof;

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI RAJEEV CHANDRASEKHAR)

(a): Yes, Sir. Ministry of Electronics and Information Technology (MeitY) is involved in promoting and encouraging AR & VR Technology and Startups through its agencies like CDAC and STPI in the Electronics and Information Technology sectors. The initiatives in this regard are as under:

- i. MeitY, through Software Technology Parks of India (STPI), has established the following Centres of Excellence (CoE) in AR and VR domain:
 - 1. Virtual/Augmented Reality (VARCoE) at Bhubaneswar: A CoE for AR and VR has been established at IIT- Bhubaneswar with an objective to promote R & D, Technology incubation, product development and entrepreneurship in AR & VR. This CoE has been made operational in the month of January 2018. The focus areas of this CoE are Education, Health, and Automation.
 - 2. Emerging Technologies (AR/VR) at Imphal: A CoE for AR/VR at Imphal has been established with an objective to incubate innovative start-ups in AR/VR. This CoE has been operational in the month of July 2020. The focus area of this CoE is to support start-ups & innovation in the field of Educational Technology, Virtual Reality, Augmented Reality, Gaming, and Animation etc.

- ii. PARAM Shavak AR/VR: C-DAC has developed and deployed PARAM Shavak AR/VR-Supercomputing Solution. C-DAC's PARAM Shavak AR/VR is a powerful virtual reality appliance which is capable of creating VR experiences closest to reality. This is also being effectively used towards skill generation enabling students and researchers to experiment with 3D virtual models.

(b): AR and VR technologies are helpful in creating immersive experiences which can be utilized for generating awareness about various components in the field of Electronics and Information Technology.

- i. VARCoE IIT Bhubaneswar is regularly organizing Workshops, Hackathons, Webinars etc. to promote and create awareness among students, researchers, and innovators for the implementation of AR/VR technology across sectors such as Education, Health, Entertainment, Construction, Tourism and Oil, Natural Gas & Steel Industries etc.
- ii. Virtual Reality Museums - VR Museum can be created wherein 3D models of chosen masterpieces selected from national museums situated in geographically remote locations can be made available in an online VR Museum. C-DAC has 3D-digitized around 50 objects from 5 museums from the Northeast states.

(c): Yes, Sir. MeitY has collaborated with STPI & CDAC and the contributions are as listed below:

- i. VARCoE at IIT Bhubaneswar has been established by STPI in collaboration with MSME Department, Government of Odisha and IIT Bhubaneswar.
- ii. AR/VR CoE at Imphal has been established by STPI in collaboration with the Government of Manipur, NIT Imphal, Manipur University, and IIIT Imphal.
- iii. Under FutureSkills PRIME, C-DAC in collaboration with NASSCOM and NIELET has been imparting trainings on AR & VR technologies.

(d): The following infrastructure for imparting education and training of AR & VR technologies has been established:-

- i. Virtual/Augmented Reality (VARCoE) has set up labs and related physical infrastructure at IIT-Bhubaneswar to incubated projects/start-ups.
- ii. FutureSkills PRIME has been developed in collaboration with CDAC, NASSCOM, and NIELIT. It is aimed at re-skilling/ up-skilling of IT professionals in emerging and futuristic technologies including AR & VR technologies.
