GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS

RAJYA SABHA
UNSTARRED QUESTION NO. 2265
TO BE ANSWERED ON 12TH MARCH, 2026

STATUS OF 6G DEVELOPMENT

2265   SHRI KARTIKEYA SHARMA:

Will the Minister of Communications be pleased to state:

(a)   the current status, milestones and indicative timelines for India's 6G development, including testbeds, spectrum strategy and global standard-setting participation under Bharat 6G Mission;

(b)   whether Bharat 6G Alliance is incorporating Haptic Internet (internet of touch) and immersive spatial computing into the 2030 roadmap and how such capabilities would enable use-cases like remote classrooms, skill training and tele-surgery; and

(c)   the measures proposed to support indigenous IPR creation, semiconductor and device ecosystems and specialised skilling so that Indian startups and youth benefit from the emerging 6G economy?

ANSWER

MINISTER OF STATE FOR COMMUNICATIONS AND RURAL DEVELOPMENT
(DR. PEMMASANI CHANDRA SEKHAR)

(a)   The Government released the Bharat 6G Vision Document in March 2023, outlining India's roadmap for research, development and deployment of 6G technologies with the objective of positioning India among global leaders in 6G by 2030.

To achieve the vision objectives, under Bharat 6G mission, Government is supporting the development of 6G testbeds, including 6G Terahertz (THz) communication and advanced optical communication testbeds, with participation from academic institutions, research organisations and industry. Further, a Spectrum Roadmap for 6G services has been published providing visibility on spectrum availability, quantum and timelines across RF bands over the next 10 years, covering the short term (2025–2026), medium term (2027–2030) and long term (2031–2035). The Mission also emphasises active participation in global standard-setting bodies such as 3GPP and the International Telecommunication Union (ITU) through collaboration between government, academia and industry.

(b)   Working Groups under the Bharat 6G Alliance are addressing enabling technologies such as ultra-low latency communication, high reliability and edge intelligence. Emerging technologies including Haptic Internet, immersive spatial computing, Extended Reality (XR) and AI-enabled edge computing are being examined as part of India's evolving 6G roadmap, expected to enable applications such as immersive classrooms, skill training through XR simulations, and advanced tele-medicine including tele-surgery.

(c)   The Government has taken several measures under the Bharat 6G Mission to promote indigenous innovation and participation of Indian startups. As on February 2026, under the Telecom Technology Development Fund (TTDF), 104 projects amounting Rs. 271 Crore approved for research and development of 6G technology. The Government has also established 100 5G Use Case Labs in academic institutions across the country to enable students, researchers and startups to develop and test applications, building skills and capabilities for future 6G networks.

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