

**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS**

**LOK SABHA
UNSTARRED QUESTION NO. 2979
TO BE ANSWERED ON 20TH DECEMBER, 2023**

6G TECHNOLOGY

**2979. DR. BHARATIBEN DHIRUBHAI SHIYAL:
DR. DHAL SINGH BISEN:
SHRI RAJ KUMAR CHAHAR:
SHRI GYANESHWAR PATIL:
SHRI SHANKAR LALWANI:
SHRIMATI RAKSHA NIKHIL KHADSE:
SHRI MANOJ KOTAK:
DR. UMESH G. JADHAV:**

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) the measures taken by the Government to establish as a leading contributor in the development and manufacturing of 6G technology by 2030;
- (b) the initiative taken by the Government for expansion and timely deployment of 5G network facilities in the country;
- (c) the current status of 5G cell towers fiberization through the districts and State/UT-wise;
- (d) the progress made so far in the mapping of telecom assets on the PM Gati Shakti-National Master Plan (NMP) platform; and
- (e) the details of districts or areas in the country till date where 3G and 4G services are not available including the district and State/UT-wise?

ANSWER

**MINISTER OF STATE FOR COMMUNICATIONS
(SHRI DEVUSINH CHAUHAN)**

- (a) The Government has released Bharat 6G Vision Document with the following objectives:
 - i. Design, develop and deploy 6G network to provide ubiquitous, intelligent and secure connectivity for high quality living experience.
 - ii. Affordability, Sustainability and Ubiquity which align with the national Vision of Atmanirbhar Bharat that seeks to empower every Indian to become self- reliant.

In order to take a lead in 6G technology, the Government has constituted Bharat 6G Mission and Apex Council to lay down the Phase-wise objectives of 6G, suggest the research and innovation pathways to be explored and review the progress of implementation of Bharat 6G Vision from time to time. Further, Bharat 6G Alliance (B6GA), an alliance of domestic industry, academia, national research institutions and standards organisations has been launched to enable India to become a leading global supplier of IP, products and solutions. B6GA has also signed Memorandum of

Understanding with NextG Alliance of USA to explore collaboration opportunities on 6G wireless technologies. The Government has also taken following steps to take a lead in development of 6G technology by 2030:

- a. Government has launched Telecom Technology Development Fund (TTDF) scheme with 5% of annual collections from Universal Service Obligation Fund for funding research & development of technologies, products, and services. Under TTDF, two proposals for test beds have been approved, viz. 6G THz Testbed through consortium of Society for Applied Microwave Electronics Engineering and Research (SAMEER), IIT Madras, IIT Guwahati and IIT Patna; Advance Optical Communication Test Bed with Consortium Members as IIT Madras, IIT Delhi and other academic institutions.
- b. Government has sanctioned 100 5G and beyond labs at academic institutions across India. This initiative is also a pivotal step for building a 6G – ready academic and start-up ecosystem in the country.
- c. India has contributed in International Telecommunications Union International Mobile Technology (IMT) 2030 framework, also called 6G by industry for inclusion of 'Ubiquitous Connectivity' as one of the six usage scenarios of 6G and coverage, interoperability and sustainability as capabilities of 6G technology.

(b) 5G services have been launched in India with effect from 01-10-2022. Government has taken several initiatives such as making available adequate spectrum, launching PM Gati Shakti Sanchar Portal, reforming and simplifying Standing Advisory Committee on Radio Frequency Allocations (SACFA) clearance procedure, amending the Right of Way (RoW) rules to expedite permissions etc. These have resulted in India witnessing one of the fastest roll out of 5G services in the world.

(c) Out of total 3,97,925 Basic Transceiver Stations (BTSSs), providing 5G services in the country, 2,65,613 BTSSs have fiber backhaul connectivity;

(d) As on date, the following Telecom assets have been mapped on PM Gati Shakti National Master Plan platform:

- i. 12 lakh RKM (Route Kilometers) Optical Fiber Cable (OFC) from Public Sector Undertakings (PSUs) and 21,000 km of State OFC,
- ii. 7.69 lakh mobile towers having 27.45 lakh BTSSs,
- iii. 1.33 lakh PM-WANI Wi-Fi hotspots,
- iv. 19,488 Proposed Mobile Towers of 4G saturation project,
- v. 3,795 Mobile towers (planned/radiating) of various Universal Service Obligation Fund (USOF) projects and 5 HIP (High Impact Projects).

(e) In order to provide telecom connectivity in uncovered villages in the country, the Government has undertaken numerous schemes. Government has planned 41,160 towers in uncovered areas of the country to provide connectivity to more than 54,000 villages at the cost of more than Rs. 41,331 Crore.
