

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

**RAJYA SABHA
UNSTARRED QUESTION NO. 2097
ANSWERED ON 06th AUGUST, 2026**

DEVELOPMENT OF 5G LABS AND 6G ECOSYSTEM

2097 SHRI VINOD SHRIDHAR TAWDE:

Will the Minister of Communications be pleased to state:

- (a) whether 5G laboratories have been established in academic institutions and if so, the institutions selected;
- (b) whether these laboratories are being used to develop applications in agriculture, healthcare, education and smart manufacturing;
- (c) whether a roadmap has been formulated to promote indigenous research, innovation, start-ups and 6G technologies;
- (d) the financial assistance provided and mechanism for monitoring outcomes; and
- (e) whether additional laboratories or centres of excellence are proposed for future communication technologies and if so, the details thereof?

ANSWER

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

(a) and (b) Government has established 100 5G Use Case Laboratories in academic institutions across the country with the objective of promoting innovation and facilitating the development of indigenous 5G applications. These labs are facilitating research, innovation and application development in key sectors such as agriculture, healthcare, education, smart manufacturing, transportation and smart cities etc. The initiative is strengthening the academia–start-up ecosystem and laying the foundation for India’s transition towards 6G technologies. The list of selected institutions is placed at **Annexure-I**.

(c) The Government has released Bharat 6G Vision Document in March 2023 with the objectives to design, develop and deploy 6G technologies that provide ubiquitous intelligent and secure connectivity for high quality living experience for the world to position India as a global leader in 6G technology by 2030. The detailed vision document can be accessed online at (<https://www.dot.gov.in/static/uploads/2025/08/f4d0b721c7a10245bec9112642dcb053.pdf>)

(d) and (e) The Department of Telecommunications (DoT) is supporting indigenous telecom research and innovation through Telecom Technology Development Fund (TTDF) under Digital Bharat Nidhi (DBN). As on 21.07.2026, a total of 136 Research and Development (R&D) projects have been approved under the Telecom Technology Development Fund (TTDF), with an aggregate fund disbursement of approximately ₹259 crore. Of these, 104 projects pertain to 6G-related technologies. The designated Implementation Agencies and respective committees under the TTDF guidelines regularly monitor the progress, milestones, and outcomes of the approved projects.

List of 100 5G Labs Institutes

S. No.	Institution	State / UT
1	Indian Institute of Information Technology Design and Manufacturing	Andhra Pradesh
2	Koneru Lakshmaiah Education Foundation	Andhra Pradesh
3	Vignans Foundation for Science Technology and Research	Andhra Pradesh
4	GITAM Institute of Technology and Management, Deemed University	Andhra Pradesh
5	Indian Institute of Technology Tirupati	Andhra Pradesh
6	National Institute of Technology Arunachal Pradesh	Arunachal Pradesh
7	Indian Institute of Technology Guwahati	Assam
8	National Institute of Technology Silchar	Assam
9	National Institute of Technology Patna	Bihar
10	Indian Institute of Technology Patna	Bihar
11	Dr. Rajendra Prasad Central Agricultural University	Bihar
12	Punjab Engineering College, Deemed to be University	Chandigarh
13	University Institute of Engineering and Technology, Panjab University	Chandigarh
14	IIT Bhilai	Chhattisgarh
15	National Institute of Technology Raipur	Chhattisgarh
16	Delhi Technological University	Delhi
17	Indraprastha Institute of Information Technology Delhi	Delhi
18	Jamia Hamdard	Delhi
19	Indian Agricultural Research Institute	Delhi
20	Birla Institute of Technology and Science, K. K. Birla Goa Campus	Goa
21	National Institute of Technology Goa	Goa
22	Sardar Vallabhbhai National Institute of Technology	Gujarat
23	School of Cyber Security and Digital Forensics, National Forensic Sciences University	Gujarat
24	Indian Institute of Technology Gandhinagar	Gujarat
25	Central University of Haryana	Haryana
26	National Power Training Institute	Haryana
27	National Institute of Technology Hamirpur	Himachal Pradesh
28	Indian Institute of Technology Mandi	Himachal Pradesh
29	Institute of Technology, University of Kashmir	Jammu and Kashmir
30	Indian Institute of Technology Jammu	Jammu and Kashmir
31	Birla Institute of Technology, Mesra	Jharkhand
32	Indian Institute of Technology (ISM) Dhanbad	Jharkhand
33	National Institute of Technology Jamshedpur	Jharkhand
34	Siddaganga Institute of Technology	Karnataka
35	Indian Institute of Information Technology Dharwad	Karnataka
36	BMS College of Engineering	Karnataka
37	Indian Institute of Science	Karnataka
38	VTU's Centre for Post Graduate Studies, Kalaburgi	Karnataka
39	Manipal Institute of Technology	Karnataka
40	M.S. Ramaiah Institute of Technology	Karnataka
41	National Institute of Technology Karnataka, Surathkal	Karnataka

42	Department of Electronics, Cochin University of Science and Technology	Kerala
43	National Institute of Technology Calicut	Kerala
44	Indian Institute of Space Science and Technology	Kerala
45	Indian Institute of Technology Palakkad	Kerala
46	PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur	Madhya Pradesh
47	Indian Institute of Technology Indore	Madhya Pradesh
48	Atal Bihari Vajpayee Indian Institute of Information Technology and Management Gwalior	Madhya Pradesh
49	Maulana Azad National Institute of Technology, Bhopal	Madhya Pradesh
50	DPU, Dr. D. Y. Patil School of Science and Technology	Maharashtra
51	Symbiosis Institute of Technology, Pune	Maharashtra
52	Visvesvaraya National Institute of Technology (VNIT), Nagpur	Maharashtra
53	Dr. Babasaheb Ambedkar Technological University, Lonere	Maharashtra
54	COEP Technological University	Maharashtra
55	Government College of Pharmacy, Amravati	Maharashtra
56	DKTE's Textile and Engineering Institute, Ichalkaranji	Maharashtra
57	National Institute of Technology Manipur	Manipur
58	Indian Institute of Information Technology, Senapati	Manipur
59	National Institute of Technology Meghalaya	Meghalaya
60	National Institute of Technology Mizoram	Mizoram
61	National Institute of Technology Nagaland	Nagaland
62	Christian Institute of Health Sciences and Research	Nagaland
63	Indian Institute of Technology Bhubaneswar	Odisha
64	Siksha 'O' Anusandhan, Deemed to be University	Odisha
65	Kalinga Institute of Industrial Technology, Deemed to be University	Odisha
66	National Institute of Technology Rourkela	Odisha
67	National Institute of Technology Puducherry	Puducherry
68	Pondicherry University	Puducherry
69	Dr. B.R. Ambedkar National Institute of Technology, Jalandhar	Punjab
70	Thapar Institute of Engineering and Technology	Punjab
71	Guru Nanak Dev University, Amritsar	Punjab
72	Indian Institute of Technology Ropar	Punjab
73	Banasthali Vidyapith	Rajasthan
74	Birla Institute of Technology and Science, Pilani	Rajasthan
75	Indian Institute of Technology Jodhpur	Rajasthan
76	Malaviya National Institute of Technology Jaipur	Rajasthan
77	MBM University, Jodhpur	Rajasthan
78	Sikkim Manipal Institute of Technology	Sikkim
79	National Institute of Technology Tiruchirappalli	Tamil Nadu
80	Vellore Institute of Technology	Tamil Nadu
81	College of Engineering, Guindy	Tamil Nadu
82	SASTRA, Deemed University	Tamil Nadu
83	Sri Sivasubramaniya Nadar College of Engineering	Tamil Nadu
84	Saveetha Institute of Medical and Technical Sciences	Tamil Nadu
85	SRM Institute of Science and Technology	Tamil Nadu
86	International Institute of Information Technology Hyderabad	Telangana
87	National Institute of Technology Warangal	Telangana
88	University of Hyderabad	Telangana
89	Tripura Institute of Technology	Tripura
90	Jaypee Institute of Information Technology, Noida	Uttar Pradesh

91	Motilal Nehru National Institute of Technology Allahabad	Uttar Pradesh
92	Indian Institute of Information Technology, Allahabad	Uttar Pradesh
93	Aligarh Muslim University	Uttar Pradesh
94	Indian Institute of Technology Kanpur	Uttar Pradesh
95	Indian Institute of Technology (BHU) Varanasi	Uttar Pradesh
96	College of Technology, Govind Ballabh Pant University of Agriculture and Technology	Uttarakhand
97	THDC Institute of Hydropower Engineering and Technology	Uttarakhand
98	Indian Institute of Technology Roorkee	Uttarakhand
99	National Institute of Technology Durgapur	West Bengal
100	Indian Institute of Information Technology, Kalyani	West Bengal
