GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 861
ANSWERED ON 04/02/2026

NATIONAL QUANTUM MISSION (NQM)

861 SHRI BIBHU PRASAD TARAI:
SHRI RAJIV PRATAP RUDY:
SHRI KRISHNA PRASAD TENNETI:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the objectives, scope and current status of implementation of the National Quantum Mission (NQM) including timelines and key deliverables envisaged under the Mission;

(b) the details of the funds allocated and progress made in establishing quantum computing, quantum communication, quantum sensing and quantum materials research infrastructure across the country, State/UT-wise;

(c) the number and names of Thematic Hubs (T-Hubs) established under NQM in top academic and national R&D institutions for advancing quantum computing, communication, sensing & metrology and quantum materials & devices;

(d) whether the Government has assessed the Mission's role in strengthening Country's strategic capabilities, technological self-reliance and global positioning in quantum technologies; and

(e) if so, the details thereof?

ANSWER
MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) to (c): The Government of India is implementing the National Quantum Mission (NQM) with an outlay of ₹6003.65 crore for a period of eight years. The primary objectives of the National Quantum Mission (NQM) are to develop cutting-edge quantum technologies across quantum computing, quantum communication, quantum sensing–metrology, and quantum materials, and to build a strong national ecosystem spanning R&D, infrastructure, startups, and

skilled human resources. Under the Mission, four Thematic Hubs (T-Hubs) have been established in the financial year 2024–25. These hubs have been incorporated as Section-8 Companies by their respective host institutions and have constituted their respective Hub Governing Boards (HGBs) for effective governance and administration. State of art Fabrication and Central facilities are also being established at IISc. Bengaluru, IIT Bombay, IIT Kanpur and IIT Delhi. Funds have been released to all four T-Hubs to initiate their operations. The hubs are now fully functional and are engaged in a range of activities including Technology Development, Human Resource Development, Entrepreneurship Development & Industry Collaboration and International Collaborations. The details of the Thematic Hubs are placed below:

The implementation of National Quantum Mission has broadly three timelines i.e. 3 years, 5 years and 8 years. Following are the key deliverables set under the mission:

1. **Develop intermediate scale quantum computers with 20-50 physical qubits, 50-100 physical qubits and 50-1000 physical qubits in 3 years, 5 years and 8 years, respectively.**
2. **Develop satellite based secure quantum communications between two ground stations over a range of 2000 kilometres within India as well as long distance secure quantum communications with other countries.**
3. **Develop inter-city quantum key distribution over 2000 km with trusted nodes using wavelength division multiplexing on existing optical fibre.**
4. **Develop multi-node quantum network with quantum memories, entanglement swapping and synchronised quantum repeaters at each node (2-3 nodes).**
5. **Develop magnetometers with 1 femto-Tesla/sqrt (Hz) sensitivity in atomic systems and better than 1 pico-Tesla/sqrt (Hz) sensitivity in nitrogen vacancy-centers; gravity measurements having sensitivity better than 100 nano-meter/second^2 using atoms and atomic clocks with 10-19 fractional instability for precision timing, communications and navigation.**
6. **Design and synthesis of quantum materials such as superconductors, novel Semiconductor structures and topological materials for fabrication of quantum devices for quantum computing and communication.**

S. No.	Technology Vertical	Name of the Host Institute	State	Name of the Section-8 Company
1.	Quantum Computing	IISc, Bengaluru	Karnataka	Foundation for QC Innovation
2.	Quantum Communication	IIT Madras in association with C-DoT, New Delhi	Tamil Nadu	IITM CDOT Samgnya Technologies Foundation
3.	Quantum Sensing & Metrology	IIT Bombay	Maharashtra	Qmet Tech Foundation
4.	Quantum Materials & Devices	IIT Delhi	Delhi	QMD Foundation

The details of the funds allocated and progress made in establishing quantum computing, quantum communication, quantum sensing and quantum materials research infrastructure is placed at Annexure I.

(d) to (e): The Government has undertaken a comprehensive assessment of the National Quantum Mission (NQM) with respect to strengthening India's strategic capabilities, technological self-reliance, and global standing in quantum technologies. The Mission has been structured to develop indigenous quantum computing, quantum communication, quantum sensing and quantum materials capabilities; create national-level research infrastructure through Thematic Hubs, including fabrication and centralized facilities; nurture skilled human resources and startups; and foster international collaborations in carefully selected areas. These measures contribute to reducing critical technology dependencies, enhancing secure communication and advanced computation capabilities relevant for strategic sectors, and positioning India as a leading contributor to the global quantum ecosystem.

Annexure I

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
Quantum Communication - IITM CDOT Samgnya Technologies Foundation at IIT Madras in association with C-DoT, New Delhi	Andhra Pradesh	Indian Institute of Technology Tirupati	25.28	16.49
	Bihar	Indian Institute of Technology Patna	10.90	2.94
	Chhattisgarh	Indian Institute of Technology Bhilai	1.81	0.59
	Delhi	Centre for Development of Telematics	29.03	4.47
		Indian Institute of Technology Delhi	105.23	24.44
	Jammu and Kashmir	Indian Institute of Technology Jammu	2.60	0.42
	Karnataka	Centre for Development of Advanced Computing, Bangalore	44.12	10.94
		Indian Institute of Science Bangalore	16.83	6.93
		ISRO Satellite Center	0.00	0
		Raman Research Institute	59.74	18.58
	Kerala	Centre for Development of Advanced Computing, Thiruvananthapuram	11.82	2.23
	Madhya Pradesh	Indian Institute of Science Education	1.14	0.22

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
		and Research Bhopal		
		Indian Institute of Technology Indore	6.70	2.06
	Punjab	Indian Institute of Science Education and Research Mohali	1.87	0.22
	Tamil Nadu	IITM CDOT Samgnya Technologies Foundation	162.93	14.86
		Indian Institute of Technology Madras	83.48	22.37
		Society for Electronic Transactions and Security (SETS)	10.05	3.08
	Telangana	Indian Institute of Technology Hyderabad	14.50	5.67
	Uttar Pradesh	Harish Chandra Research Institute, Prayagraj	3.02	0.42
		Indian Institute of Technology Kanpur	0.81	0.5
	Uttarakhand	Indian Institute of Technology Roorkee	17.84	7
	West Bengal	Indian Institute of Technology Kharagpur	4.61	1.2
	Sub-total for T-Hub on Quantum Communication		614.31	145.62

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
Quantum Computing - Foundation for QC Innovation at IISc. Bengaluru	Assam	Indian Institute of Technology Guwahati	15.40	8.39
	Bihar	Indian Institute of Technology Patna	2.39	0.62
	Delhi	Indian Institute of Technology Delhi	74.59	42.1
	Karnataka	Centre for Development of Advanced Computing, Bangalore	29.65	4.54
		Foundation for QC Innovation	76.62	10.37
		Indian Institute of Science Bangalore	189.47	86.23
		Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)	3.12	0.89
		Raman Research Institute	18.15	7.13
	Kerala	Indian Institute of Science Education and Research Thiruvananthapuram	30.34	12.07
	Madhya Pradesh	Indian Institute of Technology Indore	3.96	2.77

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
	Maharashtra	Indian Institute of Science Education and Research Pune	22.38	11.96
		Indian Institute of Technology Bombay	75.89	31.78
		Tata Institute of Fundamental Research Mumbai	52.43	26.3
	Orissa	National Institute of Science Education and Research Bhubaneswar	8.32	2.15
	Punjab	Indian Institute of Technology Ropar	1.30	0.31
	Tamil Nadu	Indian Institute of Technology Madras	2.08	0.5
		Society for Electronic Transactions and Security (SETS)	4.16	1.03
	Telangana	Birla Institute of Technology and Science Pilani, Hyderabad Campus	0.71	0.15
		Tata Institute of Fundamental Research Hyderabad	10.51	5.49

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
	Uttar Pradesh	Indian Institute of Technology Kanpur	14.48	10.08
		Jaypee Institute of Information Technology	2.09	0.47
	Uttarakhand	Indian Institute of Technology Roorkee	15.08	8.52
	Sub-total for T-Hub on Quantum Computing		653.13	273.85
Quantum Materials & Devices – QMD Foundation at IIT Delhi	Delhi	Indian Institute of Technology Delhi	97.63	28.32
		QMD Foundation	63.85	9.79
	Maharashtra	Indian Institute of Science Education and Research Pune	8.23	6.18
		Indian Institute of Technology Bombay	96.33	49.62
	Orissa	Indian Institute of Technology Bhubaneswar	7.37	2.66
	Tamil Nadu	Indian Institute of Technology Madras	3.83	1.72
	Uttar Pradesh	Indian Institute of Technology Kanpur	5.06	3.19
	Uttarakhand	Indian Institute of Technology Roorkee	22.43	8.27

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
	West Bengal	Indian Association for the Cultivation of Science	7.89	3.45
		Indian Institute of Technology Kharagpur	35.86	15.51
	Sub-total for T-Hub on Quantum Materials & Devices		348.49	128.71
Quantum Sensing & Metrology - Qmet Tech Foundation at IIT Bombay	Delhi	Indian Institute of Technology Delhi	4.47	1.81
	Goa	Birla Institute of Technology and Science Pilani, Goa	0.91	0.23
	Gujarat	Indian Institute of Technology Gandhinagar	1.34	0.43
	Karnataka	Indian Institute of Science Bangalore	22.00	5.6
	Madhya Pradesh	Indian Institute of Science Education and Research Bhopal	21.39	8.03
	Maharashtra	Indian Institute of Technology Bombay	98.13	14.31
		Qmet Tech Foundation	288.41	19.09
		Tata Institute of Fundamental Research Mumbai	18.60	9.85

(Amount in Crores)

Vertical Name & Thematic Hub	State	Institute	Total Sanctioned Amount (Till March, 2031)	Budget Released
	Punjab	Indian Institute of Technology Ropar	25.25	13.87
	Tamil Nadu	Indian Institute of Technology Madras	37.80	18.53
	Telangana	Tata Institute of Fundamental Research Hyderabad	5.43	1.61
		University of Hyderabad	0.85	0.24
	Uttar Pradesh	Harish Chandra Research Institute, Prayagraj	1.12	0.26
		Indian Institute of Technology Kanpur	179.42	53.16
	West Bengal	Indian Association for the Cultivation of Science	1.00	0.21
		S.N. Bose National Centre for Basic Sciences	1.54	0.35
		TCG Centres for Research and Education in Science and Technology	7.09	3.75
	Sub-total for Quantum Sensing & Metrology		714.76	151.32
Grand Total			2330.68	699.50

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