GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2202
ANSWERED ON 18/12/2025

ESTABLISHMENT OF QUANTUM FABRICATION FACILITIES

2202 SHRI ASHOKRAO SHANKARRAO CHAVAN:

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

(a) whether Government has announced the establishment of State-of-the-art Quantum Fabrication and Central Facilities at IIT Bombay, IISc Bengaluru, IIT Kanpur and IIT Delhi under the National Quantum Mission (NQM);

(b) if so, the details thereof along with the aims and objectives of establishing the said facilities at these centres;

(c) the expenditure likely to be incurred on their establishment;

(d) the time by when these projects would be completed and become operational; and

(e) the manner in which this initiative is expected to boost India's quantum research ecosystem and support startups, industry partners and academic institutions?

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

(a) to (b): Under the National Quantum Mission, two major state-of-the-art Quantum Fabrication and Central Facilities have been established at IIT Bombay and IISc Bengaluru to indigenise the fabrication of quantum computing chips and quantum sensors. Two additional small-scale facilities have also been set up at IIT Delhi and IIT Kanpur. The aims and objectives of these facilities are as follows:

i. Quantum Sensing & Metrology facilities at IIT Bombay and IIT Kanpur – accelerate breakthroughs in quantum sensing by enabling advanced sensor platforms for societal and strategic applications.
ii. Quantum Computing fabrication facility at IISc Bengaluru – enables fabrication of quantum computing chips based on superconducting, photonic and spin qubits, which are central to building scalable quantum architectures.
iii. Quantum Materials & Devices fabrication facility at IIT Delhi – drives indigenous development of quantum materials and device fabrication for scaling various quantum technologies.

(c) A total expenditure of Rs. 720 crore is expected to be incurred in the establishment of the Quantum Fabrication and Central Facilities.

(d) to (e): The Quantum Fabrication and Central Facilities at IIT Bombay, IISc Bengaluru, IIT Kanpur and IIT Delhi are being implemented in a phased manner under the National Quantum Mission. Following project approval, each institution initiated the procurement, installation and commissioning of specialised cleanrooms, cryogenic systems and advanced fabrication equipment sourced from national and international suppliers. As per current assessments, the implementation timelines across centres indicate completion around 2028. These facilities are being established for world-class quantum fabrication and device-development capabilities within the country, enabling researchers and startups for development of prototype quantum processors, sensors and materials indigenously.

*****