

**GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY
DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE
LOK SABHA**

**UNSTARRED QUESTION NO. 3611.
TO BE ANSWERED ON TUESDAY, THE 17TH DECEMBER, 2024.**

ADOPTION OF NEW TECHNOLOGIES IN THE CONSTRUCTION INDUSTRY

3611. SHRI PARSHOTTAMBHAI RUPALA:

Will the Minister of **COMMERCE AND INDUSTRY** be pleased to state:

वाणिज्य एवं उद्योग मंत्री

- (a) whether it is fact that new technologies are emerging in the construction industry globally requiring rapid upgradation and assimilation, if so, the details thereof; and
- (b) the steps taken or proposed to be taken by the Ministry, in collaboration/consultation with National Council for Cement & Building Materials (Ministry of Commerce and Industry), the Building Materials and Technology Promotion Council (Ministry of Housing), CSIR-Central Building Research Institute, Roorkee, and CSIR-Central Road Research Institute, to develop a proper strategy for smooth assimilation/adoption of new technologies in the construction industry through a coordinated approach of these entities?

ANSWER

**वाणिज्य एवं उद्योग मंत्रालय में राज्य मंत्री (श्री जितिन प्रसाद)
THE MINISTER OF STATE IN THE MINISTRY OF COMMERCE & INDUSTRY
(SHRI JITIN PRASADA)**

- (a): The construction industry in India is one of the largest sectors contributing significantly to the nation's economy. It plays a vital role in infrastructure development, urbanization, and housing needs, which are crucial for India's rapid economic growth. The advancements in the construction sector are not only improving productivity and quality but also enabling sustainable practices, paving the way for a smarter and more resilient construction industry.

The Construction sector is growing at a rapid pace owing to various Government Schemes / programmes / projects in the country such as Bharatmala Pariyojana, Ude Desh ka Aam Nagarik (UDAN), National Infrastructure Pipeline, Smart Cities Mission, upgradation of railways, waterways and airways infrastructure, etc. This requires the development and adoption of new technologies and practices for affordable, durable, and energy-efficient construction. Some such technologies are as under:-

- Application of 3D printing technology in construction
- Geopolymer concrete production
- Construction & Demolition waste for construction
- Lightweight structural concrete

- Ultra high performance concrete
- Engineered cement composites (smart materials)
- Special purpose concrete in construction
- Artificial Intelligence Driven Construction
- Building Information Modeling (BIM)
- Prefabrication and Modular Construction
- Smart Sensors and IoT in Indian Construction
- Geo-hazards and Geo-technical Engineering in Construction
- Fire Safety Engineering

These technologies address the growing demands for sustainability, resilience, and efficiency in the construction industry.

- (b):** National Council for Cement and Building Materials (NCB), Building Materials and Technology Promotion Council (BMTPC), Central Building Research Institute (CBRI) and Central Road Research Institute (CRRI) are playing important role in research/development/promotion of new technologies/products within the country. Further, these organisations along with Indian Institute of Technology (IITs)/ National Institute of Technology (NITs) are playing key role in evaluation & validation of technologies, their suitability in terms of structural & functional aspects as per Indian geo-climatic conditions, for Indian building construction sector as a whole.

These organizations are closely collaborating and complementing each other's efforts in executing various national initiatives, particularly in the construction sector by organizing workshops, conferences and online repositories to share knowledge on innovative practices. By adopting an industry-academia-research partnership approach, they are working together on joint projects to benefit the entire country.
