GOVERNMENT OF INDIA
MINISTRY OF CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION
DEPARTMENT OF CONSUMER AFFAIRS

**RAJYA SABHA**
**UNSTARRED QUESTION No. 190**
TO BE ANSWERED ON 22.07.2025

**SYNCHRONIZATION OF ALL NETWORKS AND SYSTEMS WITH IST**

190.    DR. ASHOK KUMAR MITTAL

Will the Minister of CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION be pleased to state:

(a)    the steps being taken to synchronize all networks and systems with Indian Standard Time (IST) to enhance national security and operational efficiency;

(b)    the details of measures being implemented to ensure the precision of real-time applications in critical sectors such as telecommunications, banking, and scientific research;

(c)    the actions being taken to align critical infrastructure with IST to prevent operational disruptions; and

(d)    the plans in place to ensure coordination among stakeholders for the seamless implementation of synchronized IST across all systems?

**ANSWER**

THE MINISTER OF STATE, CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION
(SHRI B.L. VERMA)

(a) to (d) :    The Department of Consumer Affairs, in collaboration with National Physical Laboratory (NPL) and ISRO, is implementing a nationwide project to disseminate Indian Standard Time (IST) through five Regional Reference Standard Laboratories (RRSLs) located at Ahmedabad, Bengaluru Bhubaneswar, Faridabad, and Guwahati. These nodes will be equipped with atomic clocks and timing systems traceable to NPL's primary time scale to provide secure and accurate time to telecom, power, financial and IT systems. Synchronization to IST for all sectors such as telecom, banking, finance, power and IT systems will ensure uniform time stamping and traceability, enhancing cybersecurity, interoperability and operational integrity across critical infrastructures.

The protocols used for dissemination of IST shall ensure high precision in real-time operations across sectors like telecom, banking and scientific research. These protocols enable millisecond to microsecond-level accuracy, crucial for high-frequency trading, 5G networks, and scientific measurements. Infrastructure at RRSLs will maintain traceability to NPL's primary time scale, supported by a Disaster Recovery Centre at RRSL, Bengaluru to ensure uninterrupted precision timing.

Multiple proactive measures are being taken to integrate critical infrastructure with Indian Standard Time (IST), including the completion of civil infrastructure and installation of atomic clocks and timing servers at five Regional Reference Standard Laboratories (RRSLs). The Department is working in close coordination with Internet Service Providers (ISPs), Telecom Service Providers (TSPs), power grids, data centers, and financial institutions to ensure their systems are ready to receive and synchronize with IST. Additionally, secure dissemination protocols are being implemented to safeguard against cybersecurity threats, including time-based spoofing or manipulation.

To ensure seamless implementation, the Department has established regular coordination with key stakeholders including DoT, MeitY, RBI, SEBI, CERT-In, NPL and ISRO. Monthly review meetings and high-level inter-agency consultations are being held to align infrastructure readiness and regulatory enforcement. Joint technical working groups are constituted with NPL, ISRO, etc. to finalize specifications, system design and indigenous software integration. Engagement are made for critical equipment with Indian service providers for optical fiber deployment for time transfer.

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