SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.
An Autonomous Institution

COURSE NAME : 19ITT302   INTERNET OF THINGS

III YEAR/ V SEMESTER

UNIT – I FUNDAMENTAL MECHANISMS & KEY TECHNOLOGIES
TOPIC - KEY IOT TECHNOLOGIES

UNIT II   FUNDAMENTAL MECHANISMS & KEY TECHNOLOGIES

Identification of IoT Objects and Services- Structural aspects of IoT-Environment Characteristics-Traffic Characteristics-Scalability-Interoperability-Security and privacy -Key IoT Technologies :Device Intelligence - Communication Capabilities - Mobility Support - Device Power –Sensor Technology -RFID Technology - Satellite Technology - IoT Enabling Technologies- WSN, Cloud computing, Big data Analytics, communication protocols, embedded systems

Key IoT Technologies

- Device Intelligence
- Communication Capabilities
- Mobility Support
- Device Power
- Sensor Technology
- RFID Technology
- Satellite Technology

Key IoT Technologies

Device Intelligence :

❑ A key consideration relates to on-board intelligence. In order for the IoT to become a reality, the objects should be able to intelligently sense and interact with the environment, possibly store some passive or acquired data, and communicate with the world around them.

Key IoT Technologies

Communication Capabilities :

❑ IP is considered to be key capability for IoT objects; furthermore, the entire TCP/IP Internet Suite is generally desirable. Self-configuring capabilities, especially how an IoT device can establish its connectivity automatically without human intervention, are also of interest.

Key IoT Technologies

Mobility Support :

- Yet another consideration relates to tracking and mobility support of mobile object. Mobility-enabled architectures and protocols are required. Some objects move independently, while others will move as one of group.

Key IoT Technologies

Device Power :

❑ A key consideration relates to the powering of the "thing," especially for mobile devices or for devices that otherwise would not have intrinsic power. M2M/IoT applications are almost invariably constrained by the following factors: devices have ultra-low-power capabilities, devices must be of low cost, and devices generally must have small physical size and be light.

Key IoT Technologies

Sensor Technology :

❑ A sensor network is an infrastructure comprising sensing (measuring), computing, and communication elements that gives the administrator the ability to instrument, observe, and react to events and phenomena in a specified environment.

Key IoT Technologies

RFID Technology :

❑ RFIDs are electronic devices associated with objects ("things") that transmit their identity (usually a serial number) via radio links. The RFID space is large and well documented.

Key IoT Technologies

Satellite Technology :

❑ Due to its global reach and the ability to support mobility in all geographical environments (including Antarctica), satellite communications can play a critical role in many broadly distributed M2M applications.