CBCS SCHEME

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21CS735

ACHARYA INSTITUTE OF TECHNOLOGY
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Date .....
BANGALORE

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Internet of Things (IoT)

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. What is IoT? Differentiate between IoT and M2M and IoT and WOT. **(10 Marks)**

b. Explain the Evolution of IoT with diagram and example. **(10 Marks)**

OR

2 a. Explain the Interdependence and reach of IoT over various application domains and Networking paradigms. **(10 Marks)**

b. Explain the Enabling IoT and Complex Interdependence of Technologies. **(10 Marks)**

Module-2

3 a. Define Sensor, explain the functional block of a typical sensor node in IoT. **(10 Marks)**

b. List and explain different types of sensing providing an example for each. **(10 Marks)**

OR

4 a. What is an actuator? Explain the different types of actuators with an example for each. **(10 Marks)**

b. Explain the sensor and actuators characteristics with examples. **(10 Marks)**

Module-3

5 a. List and explain data Formats in IoT Applications. **(10 Marks)**

b. Explain the various processing Topologies in IoT. **(10 Marks)**

OR

6 a. List and explain the key considerations in IoT device design and selection. **(10 Marks)**

b. What is processing off loading? Explain the three key aspects of processing offloading. **(10 Marks)**

Module-4

7 a. Explain IEEE 802.15.4 IoT Access Technology. **(10 Marks)**

b. Explain the Zigbee Connectivity Protocol in IoT. **(10 Marks)**

OR

8 a. Explain the Wireless HART Network Architecture. (10 Marks)

b. Explain the Bluetooth device network architecture and protocol stack. (10 Marks)

Module-5

9 a. What is Device Management, explain any Two Device Management Protocols. (10 Marks)

b. What is Framework? Explain different Interoperability Frameworks. (10 Marks)

OR

10 a. Explain different types of Data Protocols. (10 Marks)

b. Explain the following with neat diagram :
   i) EnOcean
   ii) DLNA
   iii) Konnex (10 Marks)

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