

III B. Tech I Semester Regular Examinations, Dec/Jan – 2022-23
IOT ARCHITECTURE AND ITS PROTOCOLS

(CSE- IOT & CS INCLUDING BLOCK CHAIN TECHNOLOGY)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Analyse IoT in terms of IBM IoT Conceptual Framework. [7M]
b) Discuss about features and technical specification of popular IoT Development Boards. [7M]

(OR)

2. a) Difference between NFC, BT LE, ZigBee and WLAN Protocols. [7M]
b) Discuss about the functions of Data Management and Consolidation Gateway. [7M]

UNIT-II

3. a) Explain how sensing the real world using analog and digital sensors with examples. [7M]
b) Describe the uses of actuators in devices. [7M]

(OR)

4. a) Explain Virtualization and different types of Virtualization in cloud computing paradigm. [7M]
b) Describe the cloud computing service models with examples. [7M]

UNIT-III

5. a) Discuss about features of CoAP. [7M]
b) Explain internet connectivity protocols. [7M]

(OR)

6. a) List the header fields in a TCP and UDP header and their functions. [7M]
b) Discuss about LoRaWAN architecture and its applications. [7M]

UNIT-IV

7. a) List and explain the steps in threat analysis. [7M]
b) Discuss the steps for key exchanges and encryption decryption. [7M]

(OR)

8. a) Write in details about the Arduino board with complete layout diagram and provide the complete technical specification of the Arduino. [7M]

- b) Discuss about why the authentication not sufficient and authorization needed for communicating messages. [7M]

UNIT-V

9. a) Develop an IOT model for smart water monitoring. [7M]
b) Discuss about Flood detection system using IoT. [7M]

(OR)

10. a) Write a program for controlling of LED using switch with Arduino IoT development board. [7M]

- b) Write a program for Intruder Detection using PIR motion sensor. [7M]