Code No: **20CC5T02**

R20

III B. TECH I SEMESTER REGULAR EXAMINATIONS, DECEMBER - 2022
INTRODUCTION TO IOT
(CIC)

Time: 3 Hours **Max. Marks: 70**

Note: Answer **ONE** question from each unit **(5 × 14 = 70 Marks)**

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UNIT-I

1. a) Explain in detail the architecture of IoT with a neat diagram. [7M]
   b) What is Internet of Things (IoT). What are the components required to design IoT device and which device we called IoT device, explain with example. [7M]

(OR)

2. a) List out the most significant challenges and problems that IoT is currently facing. [7M]
   b) What are the major privacy and security issues in case of Internet of Things (IoT)? [7M]

UNIT-II

3. a) Explain the importance of networking protocol LOWIPv6 in IOT context. [7M]
   b) Explain with example Message Queuing Telemetry Transport protocol. [7M]

(OR)

4. a) Explain the constrained application protocol. [7M]
   b) Explain about the importance of IPV6 protocol in IOT. [7M]

UNIT-III

5. a) Describe the architecture of SCADA and RFID Protocols in detail. [7M]
   b) What is Machine- to- Machine communication? What are the differences between IoT and Machine-to-Machine communication. [7M]

(OR)

6. a) Differentiate wire interfaces and wireless interfaces. [7M]
   b) Write down the four pillars of IoT? Why there important in developing IoT applications. [7M]

UNIT-IV

7. a) What are the different types of sensors and how to choose a sensor for a IoT application. Write two examples. [7M]
   b) Explain the procedure to build IOT with RaspBerry Pi. What are the physical devices and end points. [7M]
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(OR)

8. a) Write short notes on Aurdino programming for IoT [7M]
   b) Design your own IoT application with suitable block diagram and write its required Arduino code. [7M]

UNIT-V

9. a) Explain the role of cloud computing in IoT. [7M]
   b) Explain in detail the application of Internet of Things in home automation. [7M]

(OR)

10. a) Design a model for smart city applications and services. [7M]
    b) Demonstrate the need of data analytics for IoT and brief the challenges faced by IoT data analytics. [7M]

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