

B.TECH
(SEM V) THEORY EXAMINATION 2022-23
INTRODUCTION TO INTERNET OF THINGS

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

- a. Define sources of IoT.
- b. Define M2M.
- c. What is ARM Cortex used for?
- d. Define Wi-Fi.
- e. What is node discovery?
- f. What are wireless medium access issues in IoT?
- g. How to add two numbers in Arduino?
- h. What is the use of Arduino IDE in Arduino?
- i. How IoT is used in automotive applications?
- j. What is smart card used for?

SECTION B**2. Attempt any three of the following:****10 x 3 = 30**

- a. Write down the Characteristics of IOT.
- b. Explain the Identification Technology used for IOT. What is Intel Galileo in IoT?
- c. Explain routing protocols in IoT network.
- d. Write the steps for implementation of IoT using Arduino.
- e. Explain the various development challenges in IoT.

SECTION C**3. Attempt any one part of the following:****10 x 1 = 10**

- a. Discuss the various IOT applications.
- b. Explain IoT/M2M system layers and design standardization.

4. Attempt any one part of the following:**10 x 1 = 10**

- a. Explain wireless sensor network architecture. What is WSN Nodes?
- b. What are IoT hardware platforms? Explain Arduino and Raspberry Pi in IoT.

5. Attempt any one part of the following:**10 x 1 = 10**

- a. Why data aggregation and dissemination is important? Explain it with example.
- b. Explain MAC Protocols for IoT. What is sensor deployment?

6. Attempt any one part of the following:**10 x 1 = 10**

- a. Explain the various parts of the Arduino Platform Board.
- b. What is Arduino IDE platform? Write down the steps to import libraries into Arduino IDE.

7. Attempt any one part of the following:**10 x 1 = 10**

- a. Discuss the different security challenges in IoT.
- b. Explain the application of IoT in smart metering, E-health and city automation.