

Roll No.....

Total No. of Printed Pages: 1

Total No. of Questions: [09]

B. Tech (CSE) (Semester – 8th)

INTERNET OF THINGS

Subject Code: BCSED1812

Paper ID: [18111149]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

- Q1. Attempt the following:
- a. What is the IoT Decision Framework?
 - b. Explain the components of an IoT ecosystem.
 - c. What are the basic steps for setting up a Raspberry Pi for IoT projects?
 - d. Write advantages of Arduino.
 - e. Distinguish between an embedded device and an IoT device.
 - f. How does IoT work?
 - g. Write any two applications of sensors in IoT.
 - h. Write examples of IoT actuators.
 - i. What is LPWAN?
 - j. List two properties of an IoT device.

Section – B

(5 marks each)

- Q2. Describe the functions of the Global Navigation Satellite System (GLONASS), and the Indian Regional Navigation Satellite System (IRNSS) in location-based IoT applications.
- Q3. Compare and contrast between short-range and long-range wireless communication devices used in IoT.
- Q4. Describe the components and key players within a typical IoT ecosystem and explain how they collaborate to enable the functionality of IoT applications.
- Q5. Explain how Secure Shell (SSH) can be used to access a Raspberry Pi remotely and demonstrate the process with step-by-step instructions.
- Q6. Discuss the importance of sensing actions in IoT applications and provide examples of IoT sensors used in various domains.

Section – C

(10 marks each)

- Q7. What are various IoT solution architecture models? Evaluate their suitability for various IoT applications and industries.
- Q8. Examine the privacy issues associated with IoT. Discuss best practices for addressing these privacy issues in IoT applications.
- Q9. Analyze the communication protocols commonly used in IoT including their advantages, limitations and suitability for different IoT scenarios.