Aliah University

Odd (Autumn)–Semester Examination – 2024

(For 7th Semester BTech(CSE) Programme)

Paper Name: Internet of Things
Paper Code: CSEUGPE12

Full Marks: 80
Time: 3 Hrs

Group – A   (5X2=10)

1. Give a one-sentence answer –   Remember, CO1-CO5

    a) What is a communication protocol widely used in IoT devices for constrained networks?
    b) What functions do sensors and actuators perform, respectively?
    c) What type of computing is required in an IoT system for real-time data processing closer to the devices?
    d) Which programming language is primarily used with Arduino?
    e) What is the primary operating system used by Raspberry Pi?

Group – B
(Answer any 6 questions)   (6X5=30)

2. Explain the key components of an IoT system with suitable examples. **Understand, CO1**
3. Differentiate between Sensing and Actuation. Provide real-life use cases for both. **Understand, CO1**
4. What is Machine-to-Machine (M2M) communication? Discuss its role in IoT. 2+3 **Understand, CO1**
5. Write a short note on any two communication protocols used in IoT. **Understand, CO1**
6. Describe the basic steps to integrate a temperature sensor with Arduino. Include the circuit setup and code snippet. **Apply, CO2**
7. Explain the concept of Interoperability in IoT with an example. Why is it important? 2+3 **Understand, CO3**
8. Discuss the role of Python programming in implementing IoT solutions. **Understand, CO3**