CBCS SCHEME

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15EC752

Seventh Semester B.E. Degree Examination, Jan./Feb. 2023
IOT and Wireless Sensor Networks

Time: 3 hrs. Max. Marks: 80

Note: ***Answer FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Explain the major components of IOT system with necessary diagrams. **(10 Marks)**
b. Explain the sources of IOT development board which can be used for prototype development. **(06 Marks)**

OR

2 a. Explain OSI model the IOT/M2M systems with necessary diagram. **(08 Marks)**
b. Explain with a neat diagram constrained RESTful environment (CORE) protocol. **(08 Marks)**

Module-2

3 a. Explain with a neat diagram, internet based communication. **(10 Marks)**
b. Describe IP addressing in the IOT. **(06 Marks)**

OR

4 a. Explain cloud computing paradigm for data collection, storage and computing. **(10 Marks)**
b. Mention the features and advantage of cloud computing. **(06 Marks)**

Module-3

5 a. Explain Programming Embedded device Arduino platform using IDE. **(06 Marks)**
b. Explain five levels for software development for applications and services in the IOT or M2M. **(10 Marks)**

OR

6 a. Discuss the vulnerabilities of IOT. **(06 Marks)**
b. Explain Layered Attacker Model. **(10 Marks)**

Module-4

7 a. Explain Main sensor node hardware components with necessary diagram. **(10 Marks)**
b. List the transceiver tasks and characteristics. **(06 Marks)**

OR

8 a. Explain energy consumption of sensor nodes for operation states with different power consumption. **(10 Marks)**
b. Explain three types of mobility. **(06 Marks)**

Module-5

9 a. Explain S-MAC protocols in detail. **(08 Marks)**
b. Explain LEACH protocols in detail. **(08 Marks)**

OR

10 a. Explain energy efficient unicast protocols in detail. **(10 Marks)**
b. Explain Position Based Routing. **(06 Marks)**