CBCS SCHEME

Eighth Semester B.E. Degree Examination, July/August 2021
Internet of Things and Applications

Time: 3 hrs.

Max. Marks: 100

Note: *Answer any FIVE full questions.*

1 a. What does IOT and digitization mean? Elaborate. **(08 Marks)**
   b. Explain with neat diagram, the one M2M IOT standardized architecture. **(06 Marks)**
   c. What are the different challenges in IOT? **(06 Marks)**

2 a. Discuss IOT World Forum (IOTWF) standardized architecture. **(08 Marks)**
   b. Explain IOT Data Management and compute stack. **(06 Marks)**
   c. Define IOT. Explain the evolutionary phases of Internet. **(06 Marks)**

3 a. List and explain the charactristics and attributes concerned when selecting and dealing with connecting smart object. **(10 Marks)**
   b. What is Zigbee? Explain 802.15.4 physical layer, MAC layer and security. **(10 Marks)**

4 a. Explain in detail wireless sensors network, communication protocol and its limitations. **(08 Marks)**
   b. List and explain different types of sensors. **(06 Marks)**
   c. Write a note on LoRaWARN security. **(06 Marks)**

5 a. Discuss various IOT application transport methods. **(10 Marks)**
   b. Explain 6Ti SCH in detail. **(10 Marks)**

6 a. Discuss the need for optimization. **(08 Marks)**
   b. Explain CoAP IOT application layer protocol. **(06 Marks)**
   c. What are the key advantages of Internet protocol? **(06 Marks)**

7 a. Explain the challenges in IOT security. **(10 Marks)**
   b. Explain different components of flexible Net Flow Architecture (FNF). **(10 Marks)**

8 a. Discuss Hadoop Eco-System-Lamda architecture. **(08 Marks)**
   b. Discuss OCTAVE and FAIR formal Risk Analysis. **(06 Marks)**
   c. Compare Big Data and Edge Analytics. **(06 Marks)**

9 a. Explain the following with respect to Arduino programming:
      (i)   Structure   (ii)   Function.
      (iii) Variables and Data types.   (iv)   Digital I/O. **(10 Marks)**
   b. Explain different layers of Smart City IOT architecture. **(10 Marks)**

10 a. Explain Smart City security architecture. **(08 Marks)**
   b. Explain Smart City Traffic control architecture. **(06 Marks)**
   c. Write short note on Rasbery P_i operating system. **(06 Marks)**

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