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Question Paper Code: U6F02

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Sixth Semester

Computer Science and Engineering

21UCD602- IOT DESIGN

(Common to CSD Engineering)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1. What are the characteristics of IOT? CO1-U
2. What are Communication APIs and its types? CO1-U
3. Define the M2M value chain and mention its key components. CO1-U
4. What is OGC and how it works? CO1-U
5. What are the components of Embedded Systems? CO1-U
6. Define SCADA CO1-U
7. What is the role of cloud computing in supporting IoT applications? CO1- U
8. What are the basic steps involved in setting up an Arduino board for IoT projects? CO1- U
9. Define Arduino and its significance in IoT development CO1-U
10. Name a popular cloud service used for IoT applications. CO1-U

PART – B (5 x 16= 80 Marks)

11. (a) Draw and Describe Functional Blocks of IOT. CO1-U (16)
Or
(b) Explain various types of Sensors used in real time applications CO1-U (16)
12. (a) Briefly Explain the M2M Architecture in Detail. CO1-U (16)
Or
(b) Write a detailed note on IETF reference architecture. CO1-U (16)

13. (a) Sketch the Micro-Controller Architecture and properties in detail. CO1-U (16)
Or
(b) Explain in detail about zigbee protocol with real time CO1-U (16)
14. (a) Explain the process of reading data from sensors using the chosen microcontroller, emphasizing the use of specific libraries or functions. CO1-U (16)
Or
(b) Explain the significance of connecting a microcontroller to the internet using WiFi in IoT applications CO1-U (16)
15. (a) Illustrate the importance of data aggregation in collecting and analyzing diverse data sources within Smart City IoT implementations. CO2-App (16)
Or
(b) Illustrate the IoT based Intelligent Traffic Management System CO2-App (16)