

O.P.Code: 20EC0453**R20****H.T.No.****SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)****B.Tech. IV Year I Semester Regular Examinations February-2024
INTRODUCTION TO IoT****(Open Elective- III)****Time: 3 Hours****Max. Marks: 60****(Answer all Five Units 5 x 12 = 60 Marks)****UNIT-I**

- 1 a Describe an example of an IoT system in which information and knowledge are inferred from the data. CO1 L2 6M
b What are the protocols associated with network/internet layer of IoT? Explain them in detail. CO4 L2 6M

OR

- 2 a Define an internet protocol and compare IPV4 and IPV6. CO4 L2 6M
b Compare Transmission protocol and user data gram protocol with neat sketch. CO4 L3 6M

UNIT-II

- 3 a Describe how the environment can be more protected with the help of IoT technology in the following categories:
(i) Air pollution monitoring (ii) Noise pollution monitoring CO2 L2 6M
b Describe how the environment can be more protected with the help of IoT technology in the following categories:
(i) Forest fire detection (ii) River flood detection CO2 L2 6M

OR

- 4 Explain how IoT technology used to enable the agricultural industry as smart irrigation system to increase operational efficiency, lower costs, reduce waste, and improve the quality of their yield. CO3 L2 12M

UNIT-III

- 5 a Describe the structure of Network function Virtualization for IoT. CO3 L2 6M
b Explain the Key elements of Network function Virtualization for IoT. CO3 L2 6M

OR

- 6 a Define domain model specification with neat sketch & draw its structure in IoT system design. CO3 L3 6M
b Describe with neat sketch the Information Model specification in IoT system Design. CO3 L3 6M

UNIT-IV

- 7 a Define and explain an IoT device & give some examples. CO4 L2 6M
b Explain the GPIO pins of Raspberry Pi device with neat diagram. CO4 L2 6M

OR

- 8 a Describe the use of SPI and I2C interfaces on raspberry pi. CO4 L2 6M
b Illustrate how to interface a switch to raspberry pi. CO4 L3 6M

UNIT-V

- 9 a Implement the analytics component for the forest fire detection system. CO5 L3 6M
b Write a python code for Raspberry pi to capture image by using picamera. CO5 L3 6M

OR

- 10 a Design a weather monitoring IoT system using REST based. CO6 L3 6M
b Design a weather monitoring IoT system using Web Socket based. CO6 L3 6M

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