

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. IV Year I Semester Regular & Supplementary Examinations December-2024

INTRODUCTION TO IOT

(Open Elective (OE) – III)

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a With the help of neat Sketch, describe the levels1-3 and deployment templates of IoT with an example each. CO4 L3 6M
- b With the help of neat Sketch, describe the levels4-6 and deployment templates of IoT with an example each. CO4 L3 6M

OR

- 2 a Describe various Logical functional blocks of IoT. CO1 L2 6M
- b Write down the differences between Rest API & Web Socket API. CO1 L2 6M

UNIT-II

- 3 a Define how the IoT technology can be constructed in smart lightening and Intrusion detection systems for home automation. CO2 L3 6M
- b Describe how the IoT technology can be constructed in smart appliances and smoke/gas detection systems for home automation. CO2 L3 6M

OR

- 4 a Explain the necessity of adopting IoT technology for a growing need to increase customer loyalty and deliver the best in-store experience by retail sector in the following sectors:
(i) Inventory management (ii) Smart payments. CO2 L2 6M
- b Explain the necessity of adopting IoT technology for a growing need to increase customer loyalty and deliver the best in-store experience by retail sector in the following sectors: Smart vending machines. CO2 L2 6M

UNIT-III

- 5 a Mention the communication protocols used for M2M local area networks. CO3 L1 6M
- b Explain the differences between Machines in M2M and Things in IOT. CO3 L2 6M

OR

- 6 a Mention advantages and Disadvantages of M2M communication system. CO3 L1 6M
- b What are the characteristics of M2M network? CO3 L1 6M

UNIT-IV

- 7 a Describe various features of a Raspberry Pi device. CO4 L2 6M
- b List out various versions of raspberry pi devices till date. CO4 L1 6M

OR

- 8 a Write a short note on various raspberry pi interfaces used for data transfer. CO4 L2 6M
- b List out various single board computers which are alternatives to Raspberry pi. CO4 L1 6M

192

UNIT-V

- 9 a** Design a smart home automation system using IoT With mode REST service. **CO6 L3 6M**
- b** Explain service specification for home automation system in state service. **CO5 L4 6M**

OR

- 10 a** Write a python program for REST service and smart parking using Django. **CO6 L3 6M**
- b** Define Information model and controller service for smart parking IoT system. **CO5 L3 6M**

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