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

M.Tech I Year II Semester Regular Examinations October 2020

Introduction to IoT

(Embedded Systems)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Explain various link layer protocols of IoT. 6M
b Describe the characteristics of IoT. 6M

OR

- 2 a Discuss the role of communication protocols and embedded systems in IoT. 6M
b Describe how wireless sensor networks became one of the enabling technologies of IoT. 6M

UNIT-II

- 3 Describe how the environment can be more protected with the help of IoT technology in the following categories: 12M
(i) Air pollution monitoring (ii) Noise pollution monitoring
(iii) Forest fire detection (iv) River flood detection

OR

- 4 Describe how the IoT technology is transforming the Industries to reduce operational costs and increasing safety & productivity in the following areas: 12M
(i) Machine diagnostics & Prognosis (ii) Indoor air quality monitoring

UNIT-III

- 5 a Mention the communication protocols used for M2M local area networks. 2M
b Explain the differences between Machines in M2M and Things in IOT. 10M

OR

- 6 a Mention the network operator requirements to address the limitations of the existing network management protocols. 6M
b What is NETCONF protocol? Explain what the different protocol layers present in Network configuration protocol. 6M

UNIT-IV

- 7 a Describe the following steps involved in IoT system design methodology: 9M
(i) Service Specifications (ii) Domain model specification
b Distinguish between procedure-oriented programming and object-oriented Programming. 3M

OR

- 8 Describe how the python file handling with some example. 12M

UNIT-V

- 9 a With the help of neat diagram explain the basic building blocks of IoT device. 8M
b Mention the flavors of Linux OS supported by Raspberry pi device. 4M

OR

- 10 a Illustrate how to interface a switch to raspberry pi. 2M
b Write a Program to send a mail "Hello, from Raspberry pi" in python. 10M

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