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

B.Tech IV Year I Semester Supplementary Examinations November- 2020

EMBEDDED SYSTEMS

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

1 With the help of neat block diagram, Explain Architecture of Embedded System. **12M**

OR

2 a Explain briefly about typical characteristics of Embedded system. **4M**

b Write a short note about the following:

i) Cross-assembler ii) IDE iii) Prototyper iv) Linker **8M**

UNIT-II

3 What is a Sensor? Classify various types of sensors used in embedded systems. **12M**

OR

4 a Write short notes on:

i) Watchdog timer ii) Embedded firmware **4M**

b Explain in brief about the following communication interfaces

i) USB ii) IEEE 1394 **8M**

UNIT-III

5 With neat sketch, explain block diagram of ATmega328/P Microcontroller. **12M**

OR

6 a Define I/O port? Explain about various I/O ports of ATmega328/P μ C **6M**

b What is USART? Explain in brief about USART in ATmega328/P μ C **6M**

UNIT-IV

7 a Explain about various data types of Arduino programming with an example **8M**

b Explain about the comparison operators with an example **4M**

OR

8 Explain following elements of Arduino programming with an example **12M**

i) Variable scope & Qualifiers ii) Utilities iii) Conversion

UNIT-V

9 With a neat sketch, explain the architecture of IoT **12M**

OR

10 a Explain the following **6M**

i) DNS ii) IP address iii) DHCP

b Explain in brief about the XMPP protocol **6M**

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