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Reg.No. | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
M.Tech I Year I Semester Regular & Supplementary Examinations February 2018
MICRO CONTROLLERS & INTERFACING
(Common to CS, PE and ES)

Time: **3** hours   Max. Marks: **60**

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

UNIT-I

1   a   Explain Serial data transmission modes in detail   6M
    b   Write an 8051 assembly program to transfer the message "TWO" serially at 9600 baud rate, 8-bit data, 1stop bit.   6M

OR

2   a   Explain about Bit addressable memory in 8051.   4M
    b   What are the interrupts available in the 8051 microcontroller? Explain Interrupt Enable (IE) & Interrupt Priority (IP) in SFR   8M

UNIT-II

3   a   Explain about the operating modes of Motorola 68HC11 Microcontroller?   5M
    b   Classify the timers of PIC microcontroller and explain it.   7M

OR

4   a   With a suitable diagram, describe the architecture of Motorola 68HC11?   7M
    b   Discuss the following serial interface peripherals of PIC 16C74 microcontroller: (i) I^2C bus   (ii) UART   5M

UNIT-III

5   a   Discuss about MMU (memory management unit) of 8051, Motorola 68HC11 microcontrollers.   5M
    b   Discuss about (i) Instruction and data cache   (ii) Timers   7M

OR

6   a   Give a brief note on on-chip counter, serial I/O.   7M
    b   What is watchdog timer? What should be done to set up watchdog timer before to use it?   5M

UNIT-IV

7   a   Write short notes on ARM6TDMI   4M
    b   Explain the different Instructions of ARM processor and explain each instruction with example.   8M

OR

8   a   List the features of ARM processor   5M
    b   What do you mean by ARM.? Explain about memory organization of ARM   7M

UNIT-V

9   a   Explain about Serial Communication Controller   7M
    b   Explain the specifications of RS232 / RS435   5M

OR

10   a   Explain the major levels of embedded system design process with an example   8M
    b   Explain the case study of Automotive application   4M

*** END ***