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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)**B.Tech II Year I Semester Supplementary Examinations July-2022****MICROPROCESSORS & MICROCONTROLLERS**

(Common to CSE &amp; CSIT)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Define microprocessor. Explain the brief history of evolution of  $\mu$ P. L1 6M  
b Draw the block diagram of microcomputer and explain function of each block. L2 6M

**OR**

- 2 With a neat sketch explain any example of a microcomputer system. L1 12M

**UNIT-II**

- 3 a Explain briefly the control & status signals in 8085 $\mu$ P. L2 6M  
b Define and explain the different types of interrupts available in 8085  $\mu$ P. L2 6M

**OR**

- 4 a Define instruction. L1 2M  
b Explain the instruction, data formats & data storage in 8085  $\mu$ P. L2 10M

**UNIT-III**

- 5 With the help of a neat block diagram, Explain the internal architecture of 8051 microcontroller in detail. L2 12M

**OR**

- 6 a Define counter. Mention the applications of counter. L2 6M  
b Describe the operation of timers present in 8051 $\mu$ C. L2 6M

**UNIT-IV**

- 7 a Define addressing mode. L1 2M  
b List various addressing modes of 8051 microcontroller and explain them with an example each. L4 10M

**OR**

- 8 a Write an assembly program of 8051  $\mu$ C to divide two 8-bit numbers and store the result in a memory location. L2 6M  
b Write an assembly program of 8051  $\mu$ C to subtract two 8-bit numbers and store the result in a memory location. L2 6M

**UNIT-V**

- 9 a Define Interrupt and classify the interrupts. L1 6M  
b Explain multiple interrupts present in 8051 $\mu$ C. L2 6M

**OR**

- 10 Design and explain any microcontroller-based system. L4 12M

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