19/12/2022

S E Sem IV C Scheme, R-2019, Computer Nov Dec 2022

Duration: 3hrs

[Max Marks:80]

N.B.: (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

1    Attempt any FOUR                                                   [20]

   a   Explain the Floating point Pipeline of Pentium Processor.

   b   What is the advantage of Memory Banking in 8086 Processor?Justify with example.

   c   Write an assembly language program for searching a Character in a Given String.(Consider your own String)

   d   Explain the following instructions: XLAT, DAA,LAHF,AAA related to 8086.

   e   Differentiate between real Mode , Virtual Mode and Protected Mode of 80386 Processor.

2   a   Draw and explain write operation Timing diagram of 8086 Processor in Maximum mode.      [10]

   b   Draw and Explain the Master Slave Mode of 8259 Processor with Suitable   [10] example. Consider Slave 8259 connected to IR0 and IR4 of master.

3   a   Design 8086 microprocessor based on following Specifications:      [10]
       1. MP 8086 working at 10MHz minimum mode.
       2. 64 KB ROM using 16KB Devices
       3. 32KB RAM using 16KB chips

   b   Explain Mode 2 of 8255 with a neat block diagram. Show the CWR initialization.   [10]

4   a   Explain the 8257 DMA controller with the help of neat diagram and explain its   [10] Control Register Format.

   b   Write an ALP for 8086 to arrange 10 numbers in ascending order..      [10]

5   a   Explain the segment descriptor of 80386 processor.      [10]

   b   Explain the EFLAG REGISTER of 80386 Processor.      [10]

6   a   Explain the interrupt structure of 8086 processor.      [10]

   b   Explain the Branch Prediction Mechanism of Pentium Processor.      [10]

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