

19/12/2023

Duration: 3hrs

[Max Marks: 80]

- A. 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.

[20]

1 Attempt any FOUR

- Explain the Floating point Pipeline of Pentium Processor.
- What is the advantage of Memory Banking in 8086 Processor? Justify with example
- Write an assembly language program for searching a Character in a Given String. (Consider your own String)
- Explain the following instructions: XLAT, DAA, LAHF, AAA related to 8086.
- Differentiate between real Mode, Virtual Mode and Protected Mode of 80386 Processor

[10]

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 example. Consider Slave 8259 connected to IR0 and IR4 of master.

[10]

3 a Design 8086 microprocessor-based on following Specifications:

- MP 8086 working at 10MHz minimum mode.
- 64 KB ROM using 16KB Devices
- 32KB RAM using 16KB chips

[10]

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 Control Register Format.

[10]

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.
