

13/12/2024 CSE-AIML SEM-IV C SCHEME MICROPROCESSOR QP CODE: 10066522

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 minimum mode of 8086
  - b Explain in brief cache organization of Pentium processor
  - c Write an assembly language program for 8086 to exchange contents of two memory blocks
  - d Explain the following instructions: XOR, NOP related to 8086.
  - e Discuss in brief the Segment Register of 80386DX
- 2 a Explain the implementation of Paging in Protected mode of 80386. [10]
- b Explain the modes of 8255 with proper diagram of each modes [10]
- 3 a Design 8086 microprocessor-based on following Specifications: [10]
- 1. MP 8086 working at 10MHz minimum mode.
  - 2. 16 KB DRAM using 4 KB Devices
  - 3. 32 KB SRAM using 8KB chips
- b Explain what is ISR? How does 8086 decide the priority of interrupts? [10]
- 4 a Interface Interrupt controller 8259 with 8086 Microprocessor and modes of [10]
- 8259.
- b Write an ALP for 8086 to reverse a string of 10 characters. [10]
- 5 a Differentiate between Memory Mapped I/O and I/O mapped I/O. Explain in [10]
- brief address decoding Techniques
- b Explain MESI protocol [10]
- 6 a Draw the timing diagrams for Read and Write operations in minimum and [10]
- maximum mode
- b Explain hyper threading technology and its use in Pentium 4 [10]

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