

SE Sem IV (ECS) 'C' scheme Summer 2025 Exam Date 21/5/25

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 following instructions of 8086:  
STOSB  
DAA
  - b Explain SCON register of 8051.
  - c Write a program in 8086 to exchange contents of two memory blocks.
  - d Compare microprocessor and microcontroller.
  - e Explain physical memory organisation in 8086.
- 2 a Draw register organisation in 8086 and explain typical application of each and every register. [10]
- b Explain the read and write cycle timing diagrams of 8086 in minimum mode. [10]
- 3 a What do you mean by addressing mode? What are different addressing modes supported by 8086? Explain each one of them with suitable example. [10]
- b Design 8086 microprocessor-based system using minimum mode with following specifications: i) 32 KB EPROM using 16 KB EPROM ii) 16 KB RAM using 8 KB RAM. [10]
- 4 a Write a program to transmit letter 'M' serially with a baud rate of 9600. [10]
- b Define assembler directives. With example explain all the assembler directives supported by 8086 microprocessors. [10]
- 5 a Explain various operating modes of 8255 PPI. [10]
- b Explain timer modes of 8051 [10]
- 6 Write Short note on
- a Memory banking in 8086. [05]
  - b 8284 clock generator. [05]
  - c Function of Port 0 of 8051 [05]
  - d TCON register of 8051. [05]

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