

CS (6)

4E4160

Roll No. _____

Total No. of Pages : 3

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B. Tech. IV Sem. (Main) Exam; April-May 2017
Computer Science & Engineering
4CS1A Microprocessors & Interfaces Common with IT

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 24

Instructions to Candidates :-

Attempt any **five questions**, selecting **one question** from **each unit**. All Questions carry **equal marks**. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. NIL2. NIL

UNIT - I

1 Write short notes on :

- (1) Multiplexer
- (2) De-multiplexer
- (3) Encoder
- (4) Decoder

4×4=16

OR

1 Explain following :

- (1) Microprocessor
- (2) Microcontroller
- (3) Address bus
- (4) Data bus

4×4=16

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[P.T.O.

UNIT - II

- 2 (a) Draw pin diagram of 8085 and explain each pin. 8
- (b) Classify the instructions set of 8085 and explain them. 8
- OR
- 2 (a) Explain the instruction format of 8085. Draw the timing diagram of instruction MOV A, M and explain it. 10
- (b) Explain addressing modes of 8085. 6

UNIT - III

- 3 Explain :
- (a) Interrupts of 8085.
- (b) RST instructions of 8085.
- (c) Maskable and non-maskable interrupts and related data instruction to mask or unmask interrupt.
- (d) Use of stack during interrupt processing.

4×4=16

OR

- 3 (a) Explain, with suitable functional diagram, 8259 interrupt controller and its working. 10
- (b) Explain, how subroutines are implemented and executed. Explain call by value and call by reference. 6

UNIT - IV

- 4 Explain 8255, programmable peripheral interface (controller). Explain all modes of 8255 with example.

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OR

- 4 Explain, 8254, programmable interval timer, explain all the modes of 8254 with example.

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UNIT - V

- 5 (a) Write difference between serial communication and parallel communication.

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- (b) Explain serial communication controller USART 8251. Explain its all modes with example.

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OR

- 5 (a) Explain RS232 interface protocol.

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- (b) Explain interfacing of 4*4 key pad with 8085 using 8255.

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