

4E4160

Roll No. _____

Total No of Pages: 3

4E4160

B. Tech. IV-Sem. (Back) Exam., Oct.-Nov. - 2020
Computer Science & Engineering
4CS1A Microprocessors and Interfaces

Time: 2 Hours

Maximum Marks: 48
Min. Passing Marks: 16

Instructions to Candidates:

Attempt three questions, selecting one question each from any three 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. NIL

2. NIL

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UNIT- I

Q.1 (a), Name the various types of buses in 8085 Microprocessor. Explain the function of each in brief. [8]

(b), Draw the pin diagram of 8085 Microprocessor and explain its various pins. [8]

OR

Q.1 (a) Distinguish between the memories mapped I/O & peripheral I/O. [8]

(b) Draw the block diagram of 8085 Microprocessor and explain it. [8]

[1620]

UNIT- II

Q.2 (a) Explain the following instructions of 8085 Microprocessor using suitable examples – [8]

- (i) MVI
- (ii) XTHL
- (iii) DAA
- (iv) DAD

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(b) Explain various addressing modes of 8085 Microprocessor using suitable examples. [8]

OR

Q.2 (a) Explain the following instructions of 8085 Microprocessor using suitable examples – [8]

- (i) LXI
- (ii) XCHG
- (iii) SPHL
- (iv) STA

(b) Write a program in 8085 assembly language to add to two 16 bit numbers using ADC instruction. Store the result in memory. [8]

UNIT- III

Q.3 Explain Vectored and Non-vectored interrupts of 8085. [16]

OR

Q.3 What are various interrupts available in 8085 microprocessor? Distinguish between maskable and non-maskable interrupts. [16]

UNIT- IV

- Q.4 List the major components of the 8279 keyboard / display interface and explain their function. [16]

OR

- Q.4 Explain 8255, Programmable Peripheral Interface (PPI). Explain all modes of 8255 with example. [16]

UNIT- V

- Q.5 (a) Explain the application of microprocessor in interfacing scanned multiplexed display and liquid crystal display. [8]
- (b) Write a short note on – [8]
- ✓(i) IEEE 488
 - ✓(ii) RS232C

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OR

- Q.5 (a) Draw the block diagram and pin description of USART 8251 and briefly explain formats of its mode, command and status words. [8]
- (b) Write a short note on – [8]
- (i) RS422A
 - (ii) Serial port and Parallel port
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