Roll No. _____

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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 _____

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

(b) Explain various addressing modes of 8085 Microprocessor using suitable examples. https://www.rtuonline.com [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]

[1620]

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

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] [8]

(b) Write a short note on –

    (i) RS422A

    (ii) Serial port and Parallel port