Roll No. : _____

5E5042

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B. Tech. (Sem. V) (Mercy Back) Examination, November 2018
Electrical Engineering
5EE2A Microprocessors & Computer Architecture

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

*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. NIL _____

2. NIL _____

UNIT - 1

1 (a) Draw the pin diagram of 8085 microprocessor and explain its various pins.

8

(b) Explain various type of interrupts available in 8085 microprocessor.

8

OR

1 (a) Explain the programming model of 8085 with suitable block diagram.

8

(b) How address lines are multiplexed ? Expain in detail with help of latching circuit diagram.

8

UNIT - II

2   (a)   Explain the following instructions of the 8085 microprocessor.

  (i)   LHLD

  (ii)   DAD

  (iii)   PCHL

  (iv)   DAA

                                                                    2×4=8

  (b)   Draw the timing diagram of STA and explain it.

                                                                    8

OR

2   (a)   Explain various addressing modes of 8085 using suitable examples.

                                                                    8

  (b)   Write a program to transfer one block of data into another block in same order.

                                                                    8

UNIT - III

3   (a)   Explain 8259 chip with the help of block diagram.

                                                                    8

  (b)   Define working of A/D converter with the help of diagram.

                                                                    8

OR

3   (a)   Explain programmable peripheral interface (8255) chip with the help of pin diagram.

                                                                    8

  (b)   Draw a block diagram of 8253 and explain it.

                                                                    8

UNIT - IV

4   (a)   Draw the block diagram of 8086 microprocessor and explain the following :
        (i)   Pipelining concept
        (ii)   Segmented memory concept
        (iii) Extended register concept

     (b)   Explain various addressing modes of 8086.   *8*

                                                               8

OR

4   (a)   Draw the pin diagram of 8086.
        (i)   M/IO
        (ii)   QS1 and QSO
        (iii) READY
        (iv) Address/Status Bus

                                                $2 \times 4 = 8$

     (b)   Differentiate between 8085 and 8086.   8

UNIT - V

5   (a)   Define PAL and PLA using suitable diagram.   8

     (b)   Write short notes on :
        (i)   SDRAM
        (ii)   RDRAM

                                                $4 \times 2 = 8$

OR

5   Write short notes on :
     (i)   Primary and secondary memory
     (ii)   Static and Dynamic memory
     (iii) Virtual and Physical memory
     (iv) Flash and cache memory

                                                $4 \times 4 = 16$