

6E6052

Roll No. : 15EEBEC036

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Total Printed Pages : 3

B. Tech. (Sem. VI) (Main / Back) Examination, April-May 2018  
Electronics & Communication Engg.  
6EC2A Microprocessors

Time : 3 Hours

Maximum Marks : 80  
Min. Passing Marks : 26

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 - I

- 1 (a) Draw the architecture diagram of 8085 microprocessor and explain function of various register. 8
- (b) State the differences between static and dynamic RAM. 8

OR

- 1 (a) Why are  $AD_0-AD_7$  lines are multiplexed ? With the help of latching ckt., explain how these lines are demultiplexed. 8
- (b) Explain various addressing mode in 8085 Microprocessor with example. Also explain the Instruction format. 8

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[ P.T.O.

UNIT - II

2 (a) Write a program to load the data byte 8EH in register D and F7H in register E. Mask the high order bits (D<sub>4</sub>-D<sub>7</sub>) from both the data bytes, EX-OR the low order bits (D<sub>0</sub>-D<sub>3</sub>) and display the result and also draw the flow chart.

8

(b) Explain the following instruction of 8085 Microprocessor :

- (i) LHLD
- (ii) XTHL
- (iii) DAA
- (iv) STAXB

2×4=8

OR

2 (a) Write an assembly language program to add the following five data bytes stored in memory location starting at 2060 H. If the sum generates carry stop the addition and display O/H at the output port; otherwise continue adding the display the sum

Data : 98H, A2H, 39H, 22H, 42H

8

(b) What are subroutines ? How they are useful ?

8

UNIT - III

3 (a) What do you mean by a Machine Cycle and T States ? What are basic machine cycle of 8085 microprocessor with their status signals ?

12

(b) Find the maximum time delay which can be provided using one 8 bit register. The operating frequency of microprocessor is 2 MHz.

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OR

3 (a) Draw the timing diagram of following instruction and also explain the same.

MVI B, 2EH

(b) Explain Digital to Analog Converters.

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[ P.T.O.

UNIT - IV

- 4 (a) What do you mean by Masking of interrupts ? Explain SIM instruction. 8
- (b) Explain the interrupt structure of 8085, then describe the important PIN signal and instruction involved in handling the interrupt. 8

OR

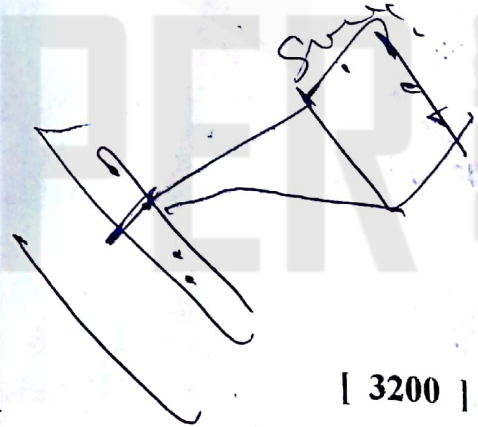
- 4 (a) Explain data Synchronous and Asynchronous transmission in 8085 Microprocessor. 8
- (b) Write short note on serial I/O standards. 8

UNIT - V

- 5 (a) Draw and explain the block diagram of DMA controller. 8
- (b) Draw the functional block dig. of 8254 IC and explain various operating mode. 8

OR

- 5 (a) List the major components of 8279 key board/display controller and explain their function. 8
- (b) Explain operating mode of 8255 programmable peripheral interface. 8



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[ 3200 ]