6E6052

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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**

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_4–D_7) from both the data bytes, EX-OR the low order bits (D_0–D_3) 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. **4**

OR

3 (a) Draw the timing diagram of following instruction and also explain the same.
MVI B, 2EH

(b) Explain Digital to Analog Converters. **8**

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