* 4 0 4 8 *

Microprocessors
(144113 / 184113 / 234113)

P. Pages : 2

Time : Three Hours **Max. Marks : 80**

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** questions from each unit.
5. Neat diagrams is to be drawn wherever necessary.
6. Figures to the right indicate full marks.

UNIT - I

1. a) Draw and explain the architecture of 8085 and explain in detail. **8**

b) Explain the terms :

i) Demultiplexing. **4**

ii) Generation of control signals in terms of microprocessor. **4**

c) Explain :

i) Flag register. **4**

ii) Different types of memories. **4**

UNIT - II

2. a) Draw and explain timing diagram for instruction MOV A, M. **8**

b) Explain instructions MOV, MVI, JMP, CALL. **8**

c) i) Explain the term subroutine. **4**

ii) Explain instructions ANA, XRA with example. **4**

UNIT - III

3. a) Write a program to add two right bit numbers. Check whether any carry is generated during addition. If carry is generated display 01 at the output port otherwise display the result. **8**

b) Write a program to multiply two eight bit numbers stored in memory location 7000H and 7001H. Store the result at 7002H. **8**

c) Explain the different addressing modes with example. **8**

UNIT - IV

4. a) What is stack ? Explain any four stack related instructions. **8**

b) Explain the interrupt structure of 8085. **8**

c) Write an ALP to add ten bytes of data stored in memory location starting at 7000H. Store the result at location 7200 H & 7201H. **8**

UNIT - V

5. a) Explain the working of programmable peripheral interface 8255 with block diagram. **8**

b) Explain the working of 8254 PIT/C with block diagram and control word. **8**

c) Explain all possible modes of 8255. **8**

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