Total No. of printed pages = 4

Et-502/MP/5th Sem/2013/M

MICROPROCESSOR

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No.1 and any *four* from the rest.

1. (a) Fill in the blanks : 1×10=10

(i) 8085 is a ——— bit microprocessor.

(ii) There are ——— interrupt lines of 8085.

(iii) The supply voltage of 8085 is ———.

(iv) The operating frequency of 8085 is ———.

(v) The width of data bus of 8085 is ———.

[Turn over

(vi) The memory addressing capacity of 8085 is ———.

(vii) Stack operates on ——— principle.

(viii) ALE means ———.

(ix) Program Counter is a ——— bit register.

(x) In 8085 ——— number pin is for GND.

(b) Write the meaning of the following opcodes : 1×4=4

(i) LXI

(ii) ADI

(iii) DAA

(iv) CMC

2. (a) Draw and explain the block diagram of 8085. 8

(b) What are the various status flags of 8085 ? Discuss their functions. 6

3. (a) Draw and explain the timing diagram for opcode fetch operation. 8

(b) Define fetch cycle, execution cycle and instruction cycle. 6

4. (a) What are the different addressing modes of 8085 ? Discuss with example. 8

(b) Write an assembly level program for 8085 to add 10 numbers stored in memory location starting from 0F00H and store the result in memory location 0F0AH. 6

5. (a) What do you mean by DMA data transfer scheme ? Discuss the function of DMA Controller Intel 8257. 8

(b) What are the various interrupt lines of 8085 ? Discuss them with their priorities. 6

6. (a) Draw and discuss the control word structure of Intel 8255. 8

(b) Determine the control word for the following configuration of the port of 8255 : 6

Port A – Input

Mode of Port A – Mode 1

Port B – Output

Mode of Port B – Mode 0

Port C_{lower} – Input

Port C_{upper} – Output

7. Write short notes on any *two* : 2×7=14

(a) Jump Instructions of 8085

(b) Stack

(c) Semiconductor memory.