Total No. of printed pages = 3

Et-502/Microp/5th Sem/2014/N

MICROPROCESSORS

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 *seven* from the rest.

1. (a) Fill in the blanks : 1×5=5

(i) ..... is a read and write memory.

(ii) 8085 processor can address ..... locations.

(iii) ..... register holds the address from which next byte is to be fetched.

(iv) Opcode fetch cycle consists of ..... T-states.

(v) In 8255 PPI, the bidirection port is ..... .

[Turn over

(b) Answer the following : 3×3=9

(i) What is meant by resetting a micro-processor ?

(ii) How HOLD signal is used for DMA operations ?

(iii) What is the role of the program counter in executing instructions ?

2. Draw and describe the 8085 bus. 8

3. Describe with diagram the machine cycles in executing the instruction MVI A 2B. 8

4. (a) Give the characteristics of the stack. 4

(b) Write a program to define stack at 85FF and store the contents of all the register pairs to stack. 4

5. (a) Write an assembly language program to complement the content of the accumulator and logically AND it with D6H. Store the result in 8280H. 4

(b) Write an assembly language program to add 2AH to the content of the memory location 8150H. Store the result in 8151H. 4

6. Give description of the two I/O techniques. 8

7. In a 8255 PPI, the content of the CWR is 8AH. Find the status and modes of the different ports. 8

8. With internal block diagram, describe the working principle of 8259 PIC. 8

9. Write brief notes on any *two* : 2×4=8

   (a) 8085 flags

   (b) Delay subroutines

   (c) A/D converter.