Total No. of printed pages = 3

Et-502/Micro/5th Sem/2016/N

MICROPROCESSOR

Full Marks – 70

Pass Marks – 28

Time – Three hours

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

Answer any *five* questions.

1. (a) Describe the different types of buses of 8085 microprocessor with proper diagram. 7

   (b) Draw and explain the timing diagram for memory read operation. 7

2. (a) Write and explain with examples the different 8085 arithmetic instructions. 5

   (b) What is DMA controller ? Explain the function of DMA controller with diagram. 3+6=9

[Turn over

3. (a) Explain why D/A conversion is required. 3

(b) With a practical circuit, describe a D/A converter. 5

(c) Explain why loops are used in programs. 6

4. (a) Write an assembly language program to add two 8-bit numbers. 7

(b) Write an assembly language program to compare two numbers and store the bigger number in the memory location 2500 H. 7

5. (a) Define : Instruction cycle, machine cycle and T-states. 2+2+2=6

(b) How many address buses are required to address 2K memory ? 2

(c) What are bit, byte and nibble ? 3

(d) What is mnemonics ? 2

(e) What is multiplexing of buses ? 1

6. (a) In a 8255 PPI, the content of the CWR is 8 AH. Find the status and modes of the different ports. 6

(b) With the help of an internal block diagram, describe the working principle of 8259 PIC. 8

7. (a) Write the meaning of the following 8085 instructions : 2×4=8

JMP 8000 H, STA 7012 H, INR B, DCX C.

(b) Describe the interface connection of a 7-segment display, which can display alphabets as well as digits. 6

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

(a) 8085 flags

(b) Stack and stack pointer

(c) RS-232 standard

(d) CALL instructions of 8085

(e) HOLD signal in a DMA operation.