Total No. of printed pages = 3

ET-502/Microprocessor/5th Sem/2015/M

MICROPROCESSOR

Full Marks – 70

Pass Marks – 28

Time – Three hours

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

Answer any *seven* questions.

1. Draw the functional block diagram of 8085 and explain its various components. 10

2. (a) Explain the functions of the different 8085 internal registers in executing programs. 8

   (b) How many address lines are required to address 256 memory locations ? 2

3. (a) Define : 2×3=6

   Instruction set, Opcode and Operand.

   (b) Write the meaning of the following 8085 instructions : 1×4=4

   JMP 8023H, INR B, STA 8025H,

   LXI 2025 H.

[Turn over

4. What is Direct Memory Access ? Explain with internal block diagram of 8257 DMA controller. 2+8=10

5. (a) Write an assembly level program to complement a number stored in memory location 2000H. Store the result in memory location 2001H. 5

   (b) Write assembly program to multiply two numbers stored in memory locations AF00 and AF01. Store the result in AF 02 location. 5

6. (a) With block diagram, explain the operation of PPI 8255. 8

   (b) Name the jump instructions of 8085. 2

7. With the help of an internal block diagram, explain the function of the 8259 Programmable Interrupt Controller. 10

8. (a) Draw the timing diagram of memory read operation of 8085 and explain. 7

   (b) Arrange the following according to priority : RST 7.5, RST 6.5, RST 5.5, INTR, TRAP. 3

9. (a) Why D/A conversion is required ? 2

(b) With a practical circuit, describe a D/A converter. 8

10. (a) Define machine language, assembly language and high level language. 3

(b) What is memory mapped I/O and I/O mapped I/O ? 4

(c) What is stack ? Explain the operation of a stack. 1+2=3

11. Write short notes on any *two* : 5×2=10

(a) CALL instructions of 8085

(b) 8255 PPI control word

(c) Memory map

(d) Program counter

(e) Different flag registers of 8085 microprocessor.