Total No. of printed pages = 4

Co-403/MP/4th 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. Answer the following short questions : 5×2=10

   (a) Define carry and auxiliary carry flag.

   (b) Give the full form of IR, MAR, PC and SP.

   (c) Name two 1-byte and two 2-byte instructions.

   (d) Explain the function of decoder.

   (e) What do you understand by a tri-state buffer ?

[Turn over

2. Illustrate the function of a memory fetch operation with the help of a block diagram, also draw the timing diagram for the same. 15

3. (a) Define the following terms : 4×2=8

   (i) ALE

   (ii) Encoder

   (iii) Machine cycle

   (iv) Instruction cycle

   (b) Write about interrupt. Name different interrupt signals of 8085 microprocessor and explain them. 2+5=7

4. (a) Draw the internal architecture of 8085 microprocessor and explain major components in brief. 10

   (b) Write about addressing modes of 8085 microprocessor. 5

5. (a) Illustrate function of DMA controller (8257) with diagram. 7

(b) Explain Programable Interval Timer (8253) with the help of diagram. 8

6. Define the following assembly language statements with the information : 5×3=15

(i) No. of byte

(ii) No. of machine cycle

(iii) No. of T-state for each. (Any five)

(a) JC (b) MVI

(c) STA (d) ORA

(e) RAL (f) DCR

(g) LDA

7. (a) Write an assembly language program to subtract the content of register B from register C. 5

(b) Explain the function of & segment LED display. 3

(c) Explain the bus structure of 8085 MPU with diagram. 7

8. Write short notes on any *three* : 3×5=15

(a) Pin Out diagram of 8085 MPU.

(b) Programmable Peripheral Interface (8255).

(c) Programmable Interrupt Controller (8259).

(d) Memory mapped IO.