Total No. of printed pages = 3

Co-403/Micro/4th 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 question No.1 and any *four* from the rest.

1. Answer in brief : 5×2=10

   (a) Specify size of registers in bits : PC, SP, IR, MAR.

   (b) Define encoder.

   (c) Define decoder.

   (d) What do you mean by TRAP ?

   (e) Specify the function of ALE.

2. (a) Compare memory mapped I/O and peripheral I/O. 4

   (b) When does Auxiliary carry and zero flag set ? 3

   (c) "Low order address bus is also use as data bus." — How it is possible ? 4

[Turn over

(d) Explain the following two jumping statements : 4

(i) NZ

(ii) JC.

3. (a) Illustrate the memory read operation with appropriate timing diagram. 5

(b) Draw the functionwise pin out diagram of 8085 MPU and explain each pin. 10

4. (a) Write about the programmable peripheral interface (8255). 4

(b) Explain common anode seven segment LED with diagram. 6

(c) Illustrate 8259 programmable interrupt controller. 5

5. Explain the function of the 8085 instruction along with their size in byte, machine cycle and T-state. (any *five*) : 3×5=15

(i) MVI

(ii) LDAX Rp

(iii) ADD R

(iv) DCR M

(v) JNC 16 bit

(vi) CMA.

6. (a) Explain the bus architecture with diagram. 5

(b) State the function of tri-state buffer. 3

(c) Explain the function of DMA controller with diagram. 7

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

(a) Applications of microprocessor

(b) Stepper motor

(c) Relay

(d) 8251 Programmable Communication Interface.