

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

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- (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) : $3 \times 5 = 15$
- (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* : $5 \times 3 = 15$
- (a) Applications of microprocessor
- (b) Stepper motor
- (c) Relay
- (d) 8251 Programmable Communication Interface.