

Exam. Code: 0915

Sub. Code: 6779

1079

B. Engg. (Computer Science and Engineering)

3rd Semester

CS-304: Microprocessors

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Q. No. 1 (Section-A) which is compulsory and selecting atleast two questions each from Section-B & C. Any missing or misprinted data may be assumed suitably.

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Section-A

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|----|-----|-------------------------------------------------------------------------------|-------|
| 1. | (a) | Describe general purposes registers in 8085 microprocessor. | [2X5] |
| | (b) | Draw and explain the timing diagram of MVI B, 04H. | |
| | (c) | What do you mean by RISC and CISC? | |
| | (d) | What are the purposes of troubleshooting? | |
| | (e) | Justify the basic requirement of programmable interval counter and interrupt. | |

Section-B

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|----|-----|---------------------------------------------------------------------------------------------------------|------|
| 2. | (a) | Discuss the various addressing mode in 8085 microprocessor with suitable examples. | [5] |
| | (b) | Write an assembly level program to calculate the sum of series of odd numbers from the list of numbers. | [5] |
| 3. | (a) | Write an assembly level program to sort given 8 numbers in the ascending order. | [4] |
| | (b) | Draw 'Read' and 'Write' cycle timing diagram of 8085. | [6] |
| 4. | | How does a microprocessor differentiate signal between address and data? Explain. | [10] |

P.T.O.

(2)

Section-C

5. Calculate the value of the 16-bit number that should be loaded in register DE to obtain the loop delay of 150 msec if the system clock period is 225 nsec. Does the value change if it calculated with seven T-states for JNZ in structure in last cycle? [10]
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|--------------|------|
| LXI D, COUNT | 10 T |
| LOOP: DCX D | 6 T |
| MOV A, E | 4 T |
| ORA D | 4 T |
| JNZ LOOP | 10 T |
6. Explain the various type of interrupt of 8085 and illustrate the various part of 8259 programmable interrupt controller. [10]
7. Draw the block diagram of 8255 PPI. Explain the each bits of 8255 control word with suitable example. [10]