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K – 4365

Reg. No. :

Name :

Sixth Semester B.Tech. Degree Examination, September 2020

(2008 Scheme)

08.602 : MICROPROCESSORS AND APPLICATIONS(E)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

1. Explain the function of following pins in 8085 microprocessor
(a) ALE (b) Ready (c) HOLD (d) $\overline{IO/\overline{M}}$
2. Explain the terms (a) instruction cycle (b) Machine cycle.
3. Write an 8085 assembly language program to find the 2's complement of a 16 bit number.
4. Explain what operations are performed when the following instructions are executed (a) XCHG (b) RIM (c) CMA (d) RRC.
5. Explain with suitable diagram, how an ADC is interfaced with 8085 microprocessor.
6. What is meant by interrupt driven data transfer.
7. Explain the interrupt structure of 8085 microprocessor.
8. Explain the memory segmentation in 8086 microprocessor.

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9. Explain the functions of various flag bits in the PSW of 8086.
10. What are assembler directives? Give examples.

(10 × 4 = 40 Marks)

PART – B

Answer **any three full** questions choosing one from each module.

Module – I

11. Write an assembly language program in proper format to sort an array of data in the descending order. The array is stored in memory location 4200H. The first element of the array gives the count value for the number of elements in the array. 20

OR

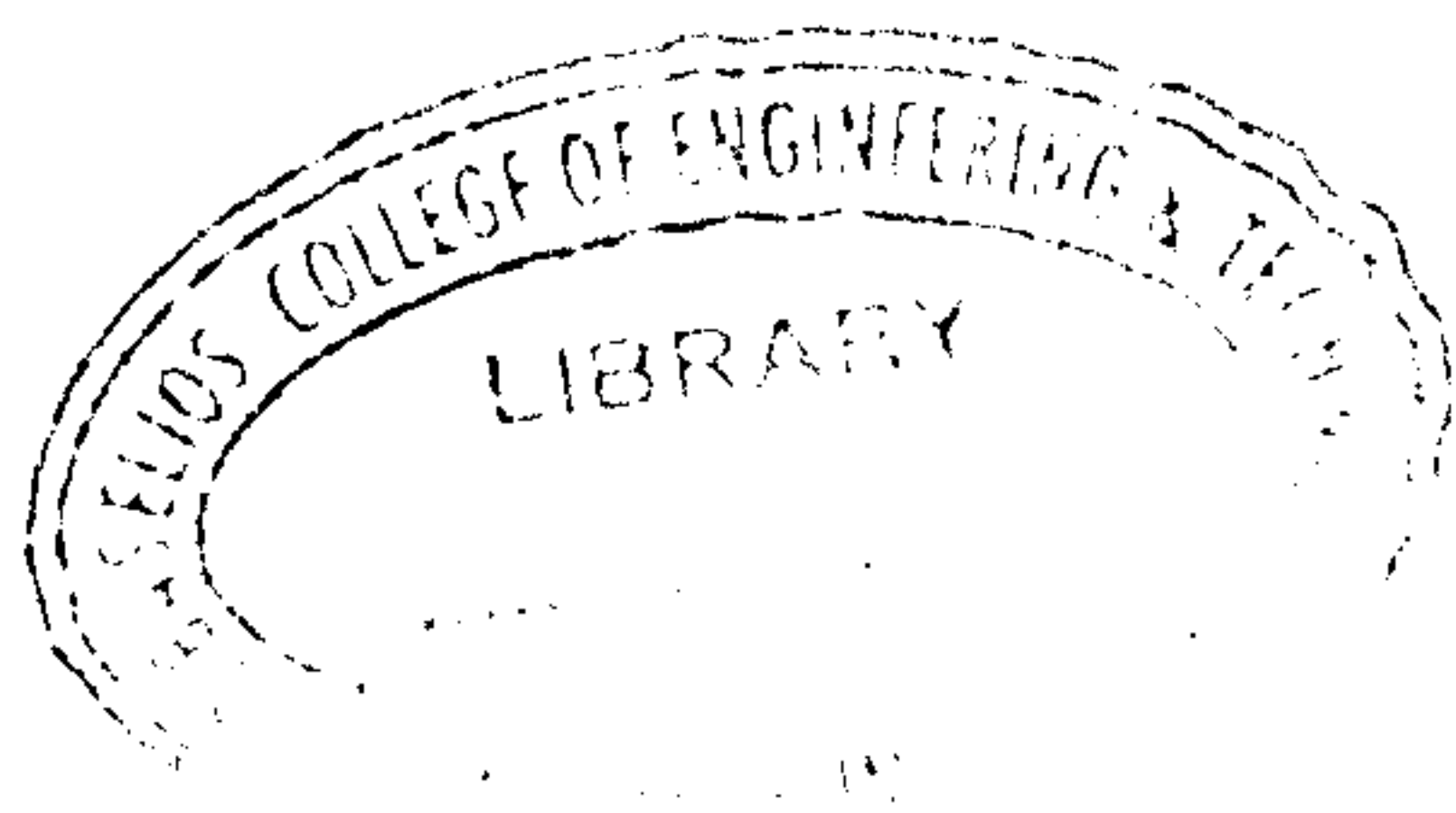
12. (a) Draw and explain the timing diagram for a memory read operation. 12
- (b) Explain CALL and RETURN instructions in 8085. 8

Module – II

13. (a) What are hardware and software interrupts. What is Interrupt service routine? 12
- (b) Explain the functions of bits in Control word register of 8255 PPI. 8

OR

14. Draw and explain the circuit for interfacing of memory chips 1K×8 RAM and 4k×8ROM using a 3 to 8 decoder with 8085 microprocessor. 20



Module – III

15. (a) Explain the different registers of 8086. 10
- (b) Show the bit positions of various flags in the flag register of 8085. Explain the functions of auxiliary carry (AC) flag. 10

OR

16. (a) Explain the process of Physical address generation in 8086. 10
- (b) Explain the minimum mode operation of 8086. 10

