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44 (6) BCA-HE-6056

2024

**MICROPROCESSOR AND ASSEMBLY
LANGUAGE PROGRAMMING**

Paper : BCA-HE-6056

Full Marks : 60

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

1. Answer the following questions : 1×5=5
 - (a) What is instruction word size ?
 - (b) What is interrupt masking ?
 - (c) RESET/CALL is instruction used to _____. (Fill in the blank)
 - (d) V_{SS} pin of 8085 microprocessor is used for _____. (Fill in the blank)
 - (e) The working frequency of 8085 microprocessor is _____ Hz. (Fill in the blank)

Contd.

2. Answer the following questions : $2 \times 5 = 10$

- (a) Explain RAL and RLC instruction with example.
- (b) What are the special purpose registers available in 8085 microprocessor ?
- (c) Differentiate between Address Bus and Data Bus of 8085 microprocessor.
- (d) Mention different control and status signals of 8085.
- (e) Define microprocessor. Give *one* example.

3. Answer **any four** from the following questions : $5 \times 4 = 20$

- (a) Draw the pin diagram of 8085 microprocessor.
- (b) Explain different data formats supported by 8085 microprocessor.
- (c) Explain the register organization of 8085 microprocessor.
- (d) Explain about vector interrupts of 8085 microprocessor.
- (e) Explain different addressing modes of 8085 microprocessor.
- (f) Explain the timing diagram of IN4H instructions.

4. Answer **any three** from the following questions : $5 \times 3 = 15$

- (a) Write program to add two numbers and store the result in register e.
- (b) Write an assembly language program to perform $x - y = 5$, where x and y are 16 bit numbers.
- (c) Write an assembly language program to check the larger of two numbers.
- (d) Write an assembly language program to find the 2's complement of a number.
- (e) Write an assembly language program to perform the addition two 16 bit numbers.

5. Write short notes on : **(any two)** $5 \times 2 = 10$

- (a) Counter and Timer Delays
- (b) 8279 Keyboard/Display Controller
- (c) 7 Segment LED
- (d) 8085 system Bus