

(d) Write an assembly language program to find the maximum from a set numbers.

(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) Stack and Subroutine

(b) 8279 Keyboard/Display Controller

(c) 7 Segment LED

(d) 8255A

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2024

**MICROPROCESSOR AND
ASSEMBLY LANGUAGE**

Paper : ITB-HD-6016

Full Marks : 60

Time : Three hours

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

1. Answer following questions : $1 \times 5 = 5$

(a) The operating voltage of 8085 Microprocessor is _____ Volts.

(Fill in the blank)

(b) The instruction set of 8085 consists of _____ instructions. *(Fill in the blank)*

(c) RESET/CALL is instruction used to _____. *(Fill in the blank)*

(d) V_{cc} pin of 8085 microprocessor is used for _____. *(Fill in the blank)*

(e) The working frequency of 8085 microprocessor is _____ Hz.

(Fill in the blank)

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

(a) Explain RAL and RAR instruction with example.

(b) What is the general purpose registers available in 8085 microprocessor ?

(c) Differentiate between Address Bus and Data Bus of 8085 microprocessor.

(d) Give *one* example of common peripheral interface device. Also state its use.

(e) Differentiate between Full Address Decoding and Partial Address Decoding.

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

(a) Draw the pin diagram of 8085 microprocessor.

(b) What is an instruction? What is instruction word size? Explain different instructions based on word size of 8085 microprocessor.

(c) Explain the different flags of the flag register of 8085 microprocessor.

(d) Explain the different types of interrupts of 8085 microprocessor.

(e) Explain the different group of signals available in 8085 with a suitable block diagram.

(f) Draw the bus timing of the following instruction :

MNEMONIC	MACHINE CODE	MEMORY LOCATION
OUT 01 H	D3	8050
	01	8051

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

(a) Write an assembly language program to find the complement of a number.

(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.