Roll No.:.....

National Institute of Technology, Delhi

Name of the Examination: B.Tech.

Re-Midsemester Examination - Autumn 2023

Branch : ECE **Semester** : V

Title of the Course : Microprocessor and Microcontroller **Course Code** : ECB 302

Time: 1 Hour 30 Minutes **Maximum Marks: 25**

Note: *All questions are compulsory.*

COURSE OUTCOMES		COGNITIVE LEVELS
CO1	Ability to analyze and develop the basic architecture of microprocessors 8085 and 8086 and microcontroller.	**Understanding** (Level II)
CO2	Ability to interface peripherals with Microprocessors and Microcontrollers	**Analyzing** (Level IV)
CO3	Ability to analyze and develop the assembly language program for microprocessor 8085 and microcontroller 8051	**Evaluating** (Level V)
CO4	Ability to design and create microprocessor/microcontroller-based system	**Analyzing** (Level IV)

Course Outcomes (CO's)	CO1	CO2	CO3	CO4
Questions No.	Q1, Q2, Q3, Q4, Q7, Q8, Q9	Q5	Q6	Q10

Answer the following questions.

Q1. What is SIM and RIM instruction? [

Q2. Differentiate between a clock cycle, a machine cycle, and an instruction cycle in 8085. List down the machine cycles involved in the execution of the **XCHG** instruction of 8085. [

Q3. Write instruction to (a) load 00H in the accumulator (b) decrement the accumulator (c) Display the answer. Specify the answer you would expect at the output port. [

Q4 List the difference between memory mapped I/O & peripheral mapped I/O. [

Q5. Write a program to read the content in the flag register and store into the memory address 8000H. [

Q6. Difference between RISC and CISC. [

Q7. Draw the timing diagram for the 8085 instruction **XTHL**, and assume other details. [

Q8 What is meant by CALL, RET, and IRET? [

Q9. Explain in detail with a neat diagram about the 8086 memory banks and the associated signals for byte and word operations. [

Q10. The figure shown below specifies the memory address range.