Graphic Era
HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act, 1956

Term Evaluation (Even) Semester Examination March 2025

Roll no.....

Name of the Course and semester: B-Tech CSE- 4th semester
Name of the Paper: Microprocessors
Paper Code: TCS 403

Time: 1.5 hour

Maximum Marks: 50

Note:

(i) Answer all the questions by choosing any one of the sub questions
(ii) Each question carries 10 marks.

Q1. (10 Marks) (CO1 & CO2)

a. Draw the programming model of 8085. Explain memory registers of 8085.

OR

b. Categorise different types of signals of 8085 with two examples each

Q2. (10 Marks) (CO2 & CO3)

a. What will be value of SP and status of flag register after execution of following program? Assume that initially all the flags are reset.

```
MVI A 79
ANI 0F
RLC
CMA
MOV L, A
XRI 78
MOV H, A
DAD H
SPHL
HLT
```

OR

b. Draw the timing diagram for instruction JMP 2050

Q3. (10 Marks) (CO3)

a. Write down any four instructions in 8085 which are used to reset accumulator. Also determine addressing mode of each instruction.

OR

b. Write an ALP using 8085 instructions to determine the sum of series of even numbers in an array of 15 numbers. Store the result in a memory location starting at 3050H.Assume that numbers are stored from starting memory location 2050H.

Q4. (10 Marks)(CO3)

a. Explain the difference between
i) LHLD 2050 & SHLD 2050 ii) RC & RRC

OR

b. Write a program in 8085 which set sign flag and parity flag and toggle 3rd and 5th bit of accumulator.

Q5. (10 Marks)(CO3)

a. How stack is implemented in 8085?

OR

b. Write a program in 8085 which converts 8 bit binary number into gray number.