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 (Odd) Semester Examination September 2025

Roll no...............................

Name of the Course and semester: Diploma-CSE, V Semester
Name of the Paper: *Microprocessor and Programming*
Paper Code: DTCS 501

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.
- *(iii)* Please specify COs against each question.

Q1.   (10 Marks)
(a) Explain with a neat block diagram the architecture of the 8085 microprocessor. (CO1)
                                        OR
(b) Compare the features and architecture of the 8085 and 8086 microprocessors. (CO1)

Q2   (10 Marks)
(a) Define microprocessor instruction set. Classify different types of instructions in 8085 with examples. (CO1)
                                        OR
(b) Describe the evolution from 8085 to modern microprocessors in terms of word length, speed, and memory support. (CO1)

Q3.   (10 Marks)
(a) Draw the pin diagram of the 8085 microprocessor. Explain the role of control and status signals. (CO1)
                                        OR
(b) Explain the function of general-purpose registers in 8086. How are they classified? (CO2)

Q4.   (10 Marks)
(a) Explain the concept of pipelining in microprocessors. Discuss its advantages and how it improves processing efficiency.(CO2)
                                        OR
(b) Describe the role of the Instruction Queue in the 8086 microprocessor and explain how it helps in prefetching. (CO2)

Q5.   (10 Marks)
(a) Analyze the role of memory segmentation in 8086. Explain how it helps in generating a 20-bit physical address. (CO2)
                                        OR
(b) Differentiate between the minimum and maximum mode of the 8086 microprocessor with proper diagrams. (CO2)