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: Diploma CS
Semester: 5th
Name of the Paper: Operating System
Paper Code: DTCS 504
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)
  a.   Define an operating system. Why is it considered the backbone of a computer system? List and
       explain any four major functions of an operating system. CO1
                                        OR
  b. Describe the importance of operating systems in modern computing environments. CO1

Q2.   (10 Marks)
  a. Explain the concept of desktop operating systems. How are they different from mainframe and real-time
  systems? CO1
                                        OR
  b. Define real-time systems. Explain the difference between hard real-time and soft real-time operating
  systems. CO1

Q3.   (10 Marks)
  a.   Explain the evolution of operating systems across the first, second, third, and fourth generations
       of computers with examples. CO1
                                        OR
  b. What is secondary storage management? Explain its importance in operating systems. CO2

Q4.   (10 Marks)
  a. Explain the different system components of an operating system. CO2
                                        OR
  b. Define a process. Explain the operations on processes with a neat diagram. CO2

Q5.   (10 Marks)
  a. Describe the layered, monolithic, and microkernel structures of an operating system. CO2
                                        OR
  b. What is booting? Explain the steps involved in the booting process. CO2