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

Mid Term (Odd) Semester Examination September 2025

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

Name of the Course and semester: Diploma III
Name of the Paper: Software Engineering
Paper Code: DTCS-304

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 Discuss the importance of software engineering in the modern software development process. Include a comparison between ad-hoc programming and engineering-based approaches. (CO1)
                                    OR
b. Provide suitable examples and explain how software products are developed and maintained differently than standalone programs.(CO1)

Q2.   (10 Marks)
a. Define and elaborate on the key characteristics such as maintainability, portability, usability.(CO1)
                                    OR
b. Identify at least four common myths related to software and explain why they are incorrect.(CO1)

Q3.   (10 Marks)
a. Describe the Waterfall, Prototyping, Spiral, and Iterative Enhancement models with diagrams and highlight their advantages and limitations.(CO1)
                                    OR
b. Describe the goals of software design and discuss the different levels such as architectural design and detailed design.(CO1)

Q4.   (10 Marks)
a. Define and differentiate coupling and cohesion. Discuss their types and explain why high cohesion and low coupling are desired in software design?(CO1)
                                    OR
b. Illustrate the typical format and main sections of a well-prepared SRS document and describe the desirable characteristics of a good SRS.((CO1)

Q5.   (10 Marks)
a. Define software metrics, differentiate product and project metrics, and explain the significance of Function Point and Feature Point metrics?(CO2)
                                    OR
b. Introduce the COCOMO model for software cost estimation, describe the basic, intermediate, and detailed models, and provide examples of how it's applied.(CO2)