

Guru Nanak Dev Engineering College, Ludhiana			
Department of Applied Sciences			
Program	B.Tech.CSE, IT	Semester	1
Subject Code	ESE-104	Subject Title	Programming for Problem Solving
Mid Semester Exam (MSE) No.	1	Course Coordinator(s)	Ranjodh Kaur, Siddharth Jain, Gagneet Kaur, Kapil Sharma, Jaswant Singh, Sita Rani, Kuljit Kaur
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MSE	28 th September, 2023	Roll Number	
Note: Attempt all questions. All assumptions must be clearly stated.			
Q. No.	Question	COs, RBT level	MM
Q1	Differentiate between algorithm and pseudocode with the help of an example.	CO1, L2	2
Q2	What will be the output for the following code snippet: <pre>int main () { int i=1,j=1; for(i=1;i<=3;i++) { for(j=1;j<=3;j++) { if(i ==2 && j==2) { printf("in continue"); continue; } printf(" %d",i); printf(" %d",j); if(++i==4 --j==5) { break; } } } printf(" %d",i); printf(" %d",j); return 0; }</pre>	CO4, L3	2
Q3	What goes behind the scene when you attempt to get an output from a source code in C programming language? Elaborate the process steps with the help of diagram.	CO2, L2	4
Q4	Given a number N and a digit D . Write a program to find how many times the digit D appears in the number N. (For example N is 13314, D is 3, answer will be 2. Value of N and D should be read through the keyboard and case must be processed if N and D are positive).	CO4, L3	4
Q5	“Initialization is always out of the loop”, this statement given in double quotes is true for which loop(s); compare and contrast the identified loop(s) with other loop(s) in detail.	CO4, L4	4
Q6	Design a menu driven code that does the following: <ul style="list-style-type: none"> If ‘1’ is entered, user-defined function ‘add’ must be able to add two positive numbers using a user-defined function If ‘2’ is entered, user-defined function ‘multiplication’ must be able to print multiplication table of positive integer numbers from 1 to n. If any other integer is entered, code must be able to terminate with a suitable message. 	CO6, L6	8