

Guru Nanak Dev Engineering College, Ludhiana			
Department of Applied Sciences			
Program	B.Tech.	Semester	2
Subject Code	ESE-104	Subject Title	Programming for Problem Solving
Test	2	Course Coordinator(s)	Ranjodh Kaur, Siddharth Jain, Gagheet Kaur, Kapil Sharma, Jaswant Singh, Sita Rani, Kuljit Kaur
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of Test	11 th March, 2024	Roll Number	
Note: Attempt all questions. All assumptions must be clearly stated.			
Q. No.	Question	MM	
Q1	Differentiate between algorithm and pseudocode with the help of an example.	2	
Q2	<p>What will be the output for the following code snippet:</p> <pre> int main () { int i,j,x=9,a = 0; char c='B'; int y = sizeof(x++); printf("%i %i %i", y, x,sizeof(c)); double d = 11.5; printf(" %lu", sizeof(a - d)); for(i=3;i<=5;i++) { for(j=3;j<=5;j++) { if(++i ==4 --j==4) { continue; } printf(" %d",i); printf(" %d",j); if(++i==6 --j==5) { break; } } } printf(" %d",i); printf(" %d",j); return 0; } </pre>	2	
Q3	Define flowchart. Construct a flowchart and write an algorithm to find sum of the digits in the number N. Value of N should be read through the keyboard and case must be processed if N is positive integer only.	4	
Q4	Differentiate between various ways of parameter passing with the help of examples.	4	
Q5	Create a user-defined function to find the number entered by the user is odd or even. Only positive integer numbers are to be considered. Make use of parameter passing concept.	4	
Q6	<p>Develop a menu driven code that does the following:</p> <ul style="list-style-type: none"> If 'A' is entered, user-defined function 'isPalindrome' must be able find whether number entered by user is palindrome or not. If 'B' is entered, user-defined function 'kgToPounds' must be able to convert kilograms to pounds, value to be converted must be read through the keyboard. (One kilogram is equal to 2.204 pounds). If any other 'character' is entered, code must be able to terminate with a suitable message. <p>[Make use of parameter passing and return type concepts while developing code. All types of inputs must be read through the keyboard with positive integers only.]</p>	8	