



SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

CAT I, February 2024

B. Tech -Winter Semester 2023\_2024

Slot:C1

Course Code : BCSE102L

Duration : 90 Minutes

Course Title : Structured and Object Oriented Programming

Max. Marks : 50

Answer all the questions

Q.NO	QUESTION	Marks	CO	BL
1	Consider an application that allows the user to enter 5 integer values, which includes both positive and negative numbers. The application will display the counts the number of positive numbers and negative numbers in the application. Use C Programming.	10	CO1	3
2	Do you think Nested if statement and else if ladder statements are similar? Justify your answer with example programs.	10	CO1	2
3	What are Storage Classes in C? List and illustrate all the types of Storage Classes with declaration syntax and example program for each?	10	CO1	1
4	Imagine you are tasked with organizing a programming competition where participants need to create a C program. The challenge involves creating two arrays, each with a minimum of 4 elements. The first array should remain unchanged, while the second array needs to be reversed. Participants must then merge these two arrays, sort the resulting array, and finally, print the sorted array. Implement the solution by passing the arrays to appropriate functions. Sample Input: Enter the number of elements for First Array : 4 Enter the elements for First Array : 4 13 12 1 Enter the number of elements for Second Array : 4 Enter the elements for Second Array : 6 7 8 9 Output: Elements After Merging 4 13 12 1 9 8 7 6 The sorted elements are 1 4 6 7 8 9 12 13	10	CO2	2
5	a. Develop a C program for a sports analytics application. The application stores the performance scores of athletes in an array. You need to write a function "Score" that takes as input an array of integers representing the athletes' scores and the size of the array. The function "Score" should return a pointer to the maximum score in the array. b. Develop a C program to enable the swapping of two numbers. The objective is to create a function "swap" that utilizes a temporary variable and pointer-based approach for exchanging the values of two given integers.	5 5	CO2	3