COMSATS University Islamabad
Sahiwal Campus
(Department of Computer Sciences)

Course Title:	Data Structure & Algorithms			**Course Code:**	CSC211	**Credit Hours:**	3+1
Course Instructor:	Ghias Ul Din Bulbun			**Programme Name:**	BS		
Semester:	4th	**Batch:**	FA-22	**Section:**	A	**Date:**	22-12-2023
Time Allowed:	180 minutes			**Maximum Marks:**		50	
Student's Name:				**Reg. No.**	CUI/		/SWL

Important Instructions / Guidelines:

Read the question paper carefully and answer the questions according to their statements.
Mobile phones are not allowed. Calculators must not have any data/equations etc. in their memory.

Note: Attempt All the Questions.

LAB
Final Examinations Fall-2023

Q#01: Write a C++ program to implement a stack using array of fixed sized 500 data elements. When program executed first of all name and registration of the student will be displayed at the top of the menu and than all other commands of stack in the form of ordered list. i.e.

1. // Push //
2. // Pop //
3. // Status of IsEmpty and IsFull //
4. // Exit //

When a menu is selected after performing action a message "You want to perform any other task y/n" and than program will play role according to the user requirement.

$(CLO^{4}/SO^{2,3,4})(20)$

Q#02: Write implementation in C++ that enables the user to create a Binary Search Tree (BST) with a user-defined number of nodes. The program should provide a menu-driven interface first of all you name and registration on the top and than allowing the user to perform in-order, pre order, and post-order traversals of the created BST. $(CLO^{4}/SO^{2,3,4})(20)$

Q#03: Viva $(CLO^{4}/SO^{2,3,4})(10)$