



COMSATS University Islamabad, Lahore Campus
Department of Computer Science

Assignment 1 – Semester FALL 2023

Course Title:	Data Structures & Algorithms	Course Code:	CSC211	Credit Hours:	4(3,1)
Course Instructor/s:	Mr. Imran Latif	Program Name:	BCS		
Semester:	4th	Section:	C&D	Batch	FA22
Total Marks:	10	Obtained Marks:		Due Date:	September 28, 2023
Student's Name:		Reg. No.			

Important Instruction:

- Student is himself/herself responsible for successful submission of assignment on Microsoft Teams.
- Your submission must include the answers in a single pdf file.
- Copied assignment will get zero credit.
- **Deadline: September 28, 2023 till 11:30 PM**

CLO: <I>; Bloom Taxonomy Level: <Applying>

Q-1 Convert the following infix expression into postfix expression by drawing three columns on your sheet.

- I. $a - b / (c + d * e)$
- II. $((a + b) * c - (d - e)) / (f + g)$
- III. $((1 + 2) * 3 + 6) / (2 + 3)$

Q-2 Write an algorithm which converts the given infix expression to its equivalent prefix expression.

Q-3 Implement a queue using the stack data structure.

Note: In this problem you can use two stacks to implement the queue.

Q-4 Explain Double ended Queue in detail.