



# UNIVERSITY OF CENTRAL PUNJAB

Faculty of Information Technology & Computer Science

Data Structures & Algorithms (SECP2043)

Assignment No. 2

Spring 2023 (Section P2 & P8)

Submission date: P8: Thursday 1<sup>st</sup> June, 2023, 01:00 pm and P2: Friday 2<sup>nd</sup> June, 2023 12:00pm

Submission mode: Handwritten A4 sheets individual assignment. Neatness and clarity carry heavy weightage.

**Q. No. 1:** Write the code for implementation of Queue using both array and linked list based implementations for following function, Do a time-complexity analysis then:

- a) isEmptyQueue
- b) isFullQueue
- c) enqueue
- d) dequeue

**Q. No. 2:** Write the procedure for conversion of Infix mathematical expression to postfix format using stack. Convert the following Infix expression to postfix by same method.

**$K - L + M / N + (O \wedge P) * W + U / V * T + Q$**