

**Class Test (2) Examination: Summer-2026**

**Course Code:** CIS 122 (Batch: 24)

**Course Title:** Data Structure

**Date:** 13/07/2026

**Time:** 30 Minutes

**Total Marks:** 15

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1. Explain the concepts of overflow and underflow with suitable examples. [4]

2. An initially empty stack has a maximum capacity of four elements. Perform the following operations in sequence: [6]

push(12), push(25), push(38), pop(), push(47), push(59),  
push(63), pop(), pop()

Show the contents of the stack and the value of **TOP** after each operation. Also write the sequence of values returned by the pop() operations.

3. Consider the following unsorted array:  $A = [17, 42, 9, 31, 65, 23, 50, 11]$  [5]

Using the **linear search** technique, what would be the result if the search value were 80?