**Teacher Assessment – I**

**(2023-24:Odd Sem.)**

**Course Code: BCA313 Course: Data Structure using C++**

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Note: Attempt all questions

Unit – I

1. List out and discuss any three data organization with example.
2. Explain the various operations of data Structure
3. Discuss the complexity of algorithm.
4. Write an algorithm to insert an element at any position in an array.
5. List out and discuss any five function of string with example.
6. Write a program in C++ to find an element in array.
7. The array data[15, 25] is stored in memory. If the base address is 500 and element size is 5, calculate the address of the element data[7, 12] with respect to row-major and column-major order.

Unit -2

1. Write down an algorithm for pop operation of stack
2. Write a code to check the condition of underflow and overflow.
3. Convert the following infix expression to postfix using stack and calculate the value of converted postfix expression using stack.

2 ^ 1 X  / 1 / (2 )

1. Differentiate between Queue and circular queue.
2. Write down an algorithm insert an element in a queue.
3. Write down an algorithm to convert infix expression to postfix expression
4. Write down an algorithm to evaluate an expression of postfix expression
5. Write down the code to delete an element from queue.