

**GIET UNIVERSITY, GUNUPUR – 765022**  
**B. Tech –2nd Semester (2024-2025): ASSIGNMENT**  
**BESBS 2040– Data Structures and Algorithms**  
**ASSIGNMENT-III**

|                            |                                      |
|----------------------------|--------------------------------------|
| <b>Date of issue:</b>      | <b>SECTION: FOR ALL SECTIONS</b>     |
| <b>Date of submission:</b> | <b>Each question carries 5 marks</b> |

| <b>SLNO</b> | <b>QUESTION</b>   | <b>CO/PO</b> |
|-------------|---|--------------|
| 1           | Design algorithm for performing PUSH and POP operations in a Linked STACK.  | CO3/PO2      |
| 2           | Design algorithm for performing insertion and deletion operations in a Linked QUEUE.                                | CO3/PO2      |
| 3           | Write down the algorithm for insertion of an item at the END of a Single Linked List.                               | CO2/PO3      |
| 4           | Design the algorithm to display all the node items of a double linked list and find the largest INFO present in it. | CO4/PO2      |
| 5           | Design an algorithm to search an ITEM and then Delete that node in a Single Linked List.                            | CO4/PO3      |
| 6           | Write down the algorithm for Reversing a Single Linked List.  | CO4/PO3      |
| 7           | Write algorithms for counting the nodes and Finding the sum of all Info Parts of a Double Linked List.              | CO3/PO4      |
| 8           | Write an algorithm to Delete a given Item from a Double Linked List.  | CO4/PO3      |
| 9           | Write an algorithm to Insertion at the beginning and Insertion at the end in a Double Linked List.                  | CO3/PO4      |
| 10          | Design an algorithm to display all the Info part of Double linked list from Last node to 1 <sup>st</sup> node.      | CO3/PO2      |