BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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Department of MCA

SUBJECT: DATA STRUCTURE & ALGORITHMS	**CODE: 22MCA103**
1a	Write a C program to find the max and min element in an array
1b	Write a C program to find the prime number in an given array
2a	Write a C program to find the sum of odd and even numbers in an array
2b	Write a C program to perform matrix multiplication
3a	Write a C program to find sum of diagonal elements in the given matrix
3b	Write a C program to implement stack with its operation
4a	Write a C program to convert infix to postfix expression
4b	Write a C program to search an element using binary search in an array
5a	Write a C program to perform postfix evaluation
5b	Write a C program to implement queue operation
6	Write a C program to implement circular queue using dynamic memory allocation
7	Write a C program to implement singly linked list with following operations A) Insert front B) Insert node at given position C) Delete rear D) Delete node at given position E) Display all nodes
8a	Write a C program to implement stack with linked list.
8b	Write a C program to implement Quick Sort.
9	Write a C program to implement doubly linked list with following operations. A) Insert rear B) Insert front C) Delete rear D) Delete front E) Display all nodes.
10a	Write a C program to implement Singly Circular linked list with following operations A) Insert rear B) Delete front C) Display all nodes
10b	Write a C program to implement Binary Search Tree with following operations. A) Create tree B) Inorder traversal C) Preorder traversal D) Postorder traversal
11A	Write a C program to implement merge sort.
11B	Write a C program to implement Insertion sort. Evaluate the time taken to run the insertion function using Unix system time and consider the large input by random function. Construct the graph showing the time vs input.