Jagannath International Management School

VasantKunj, New Delhi – 110070
(Affiliated to Guru Gobind Singh Indraprastha University, New Delhi)
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Bachelor of Computer Applications (BCA)

Course : BCA **Semester : II**
Subject Code: 20134 **Subject : VB.Net Lab**

S. No.	Question
1.	WAP to implement following operation on one dimensional array (i) Insertion (ii) Deletion (iii) Traversal (iv) Reverse (v) Merge
2.	WAP to Sort an array using menu driven: (i) BUBBLE SORT (ii) MERGE SORT(iii) INSERTION SORT (iv) SELECTION SORT
3.	WAP to implement a Singly Linked List.
4.	WAP to implement a Circular Linked Lists
5.	WAP to implement Doubly Linked Lists
6.	Write a menu driven program to implement (i) Static Stack (ii) Dynamic Stack.
7.	WAP to implement a (i) Static (ii) Dynamic Circular Queue
8.	WAP to implement a (i) Static (ii) Dynamic De-Queue.
9.	Implement recursive algorithms for the following operations on Binary Search Tree a) Insertion b) Searching
10.	Implement recursive algorithms for BST traversal- Inorder, Preorder, Postorder.
11.	WAP to search & display the location of an element specified by the user, in an array using (i) Linear Search (ii) Binary Search technique.
12.	WAP to accept a matrix from user, find out matrix is sparse or not and convert into triplex matrix.
13.	WAP to implement Polynomial addition operation using linked list.
14.	Write a C program to create two linked lists from a given list in following way INPUT List:- 1 2 3 4 5 6 7 8 9 10 OUTPUT:- First List:- 1 3 5 7 9 Second List:- 2 4 6 8 10
15.	WAP to implement Student Database using Linked List with the following structure • Name • Rollno • Marks of 5 subjects • Average • Result, If the average < 50, then print 'Fail', otherwise 'Pass'
16.	Write a program to convert Infix to equivalent (i) Prefix expression (ii) Postfix expression
17.	Write a program to evaluate (i) Prefix Expression (ii) Postfix Expression using stack.

S. No.	Question
18.	Let us assume a Patient's coupon generator for the Doctors' clinic. The patients are given the coupons on first-come-first-serve basis. After the visit of a patient, patient-ID is kept stack-wise. At the end of the day, the count is generated from the stack. Construct a menu-based program for patients' coupons generator using an appropriate data structure.
19.	WAP to implement an expression tree. (For example: (a + b / (c * d) – e))
20.	Sometimes a program requires two stacks containing the same type of items. Suppose two stacks are stored in separate arrays, then one stack might overflow while there is considerable unused space in the other. A neat way to avoid this problem is to put all spaces in one stack and let this stack grow from one end of the array, and the other stack starts from the other end and grows in the opposite direction, i.e., toward the first stack. In this way, if one stack turns out to be large and the other small, then they will still both fit, and there will be no overflow until all space is used. Declare a new structure that includes these two stacks and perform various stack operations.