

BACHELOR OF COMPUTER APPLICATION
SECOND SEMESTER (REPEAT)
DATA STRUCTURE THROUGH C
BCA-201 (OLD COURSE)
[USE OMR FOR OBJECTIVE PART]

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

1X20=20

Choose the correct answer from the following:

- 1 Visiting root node after visiting left and right sub-tree is called
 - a In-order traversal
 - b Pre-order traversal
 - c Post-order traversal
 - d None of the above
- 2 Which of the following is false about Binary Search tree?
 - a The left child is always lesser than its parents
 - b The right child is always greater than its parents
 - c The left and right sub tree should also be binary search tree
 - d None of the above
- 3 How many children does a binary tree have?
 - a 2
 - b Any number of children
 - c 0 or 1 or 2
 - d 0 or 1
4. In ____ type of search the list should be on sorted order.
 - a. Sequential search
 - b. Binary search
 - c. Both A and B
 - d. None of the above
5. The given array is arr = {1, 2, 4, 3}. Bubble sort is used to sort the array elements. How many iterations will be done to sort the array?
 - a. 3
 - b. 2
 - c. 4
 - d. None of the above
6. Which of the following algorithm does not divide the list
 - a. Linear search
 - b. Binary search
 - c. Merge sort
 - d. Quick sort
7. Which of the following algorithm design technique is used in the quick sort algorithm?
 - a. Dynamic programming
 - b. Backtracking
 - c. Divide-and-conquer
 - d. None of the above
8. The spanning tree of connected graph with 10 vertices contains .
 - a. 9 edges
 - b. 11 edges

- c. 10 edges
d. None of the above
9. A graph is a collection of nodes called _____ and line segments called arcs or _____ that connects pair of nodes.
a. Vertices, Edges
b. Edges, Vertices
c. Vertices, Paths
d. None of the above
10. The number of elements in the adjacency matrix of a graph having 7 vertices is
a. 4
b. 14
c. 36
d. 49
11. How can we describe an array in the best possible way?
a. The Array shows a hierarchical structure.
b. Arrays are immutable
c. Container that stores the elements of similar types
d. The Array is not a data structure
12. Faster access to non-local variables is achieved using an array of pointers to an activation record called a
a. heap
b. activation tree
c. display
d. stack
13. Among the following which is not a primitive data type?
a. Int
b. Float
c. Char
d. Structure
14. The best data structure to check whether an arithmetic expression has balanced parenthesis is a
a. queue
b. stack
c. tree
d. list
15. A postfix expression is merely the reverse of the prefix expression
a. true
b. false
c. Cannot say
d. sometimes
16. In a stack, the data item placed on the stack first is
a. the first data item to be removed
b. the last data item to be removed
c. given an index of zero
d. not given as index number
17. The postfix equivalent of the prefix $*+ab-cd$ is
a. $ab+cd-*$
b. $abcd+-*$
c. $ab+cd*-$
d. $ab+-cd*$
18. Which one of the following is the size of `intarr[9]` assuming that `int` is of 4 bytes?
a. 9
b. 36
c. 35
d. 13

19. Insert operation on the queue has to be done after testing

- a. overflow
- b. Memory space
- c. underflow
- d. No need to test anything

20. The address field of the linked list

- a. Contains the address of the next node
- b. Contain address of next pointer
- c. It May contain NULL character
- d. Both a) and c)

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