Data Structure BSc IT Sem III

1. _____is a logical/ mathematical model of organization of data

a) DATA

b) BIT

c) Data structure

d) information

2. adding of a new element into data structure is known as_____

a) insertion

b) deletoin

c) Traversing

d) Searching

3. Arranging the elements in ascending for descending order is known as ___-

a) insertion

b) deletoin

c) Traversing

d) Sorting

4. if the running time of the algorithm is longest for or all the inputs then the complexity is called

a) Worst case complexity

b) Average case complexity

c) Best case complexity

d) Automicity

5. A matrix M is said to be _____ if majority of its elements are meaningless.
   a) 2-D Matrix
   b) Multi dimentional Matrix
   c) inverse matrix
   d) sparse matrix

6. The Next field of the last node of the list contains the _____ value which indicates the end of the list.
    a) Begin
    b) Next
    c) Null
    d) zero
7. _____means inverting list nodes from begin to end
    e) traversing
    f) merging
    g) spliting
    h) reversing

8. following is application of linked list
    a) signal system
    b) to represent sparse matrix
    c) digital electronics
    d) microprocessor
9. A linear collection of data elements where the linear node is given by means of pointer is called?
    a. Linked list
    b. Node list
    c. Primitive list
    d. None
10. In doubly linked lists, traversal can be performed?
    a. Only in forward direction
    b. Only in reverse direction
    c. In both directions
    d. None
11. Pushing an element into stack already having five elements and stack size of 5, then stack becomes
    a) Overflow
    b) Crash
    c) Underflow
    d) User flow

12. What data structure would you mostly likely see in a non recursive implementation of a recursive algorithm?
    a) Linked List
    b) Stack
    c) Queue
    d) Tree

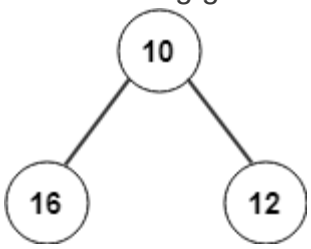
13. What is the result of the following operation?
    Top (Push (S, X))
    a) X
    b) X+S
    c) S
    d) XS

14. Which data structure is used for implementing recursion?
    a) Queue
    b) Stack
    c) Array
    d) List

15. Which of the following statement(s) about stack data structure is/are NOT correct?
    a) Linked List are used for implementing Stacks
    b) Top of the Stack always contain the new node
    c) Stack is the FIFO data structure
    d) Null link is present in the last node at the bottom of the stack
16. The data structure required for Breadth First Traversal on a graph is?
    a) Stack
    b) Array
    c) Queue
    d) Tree

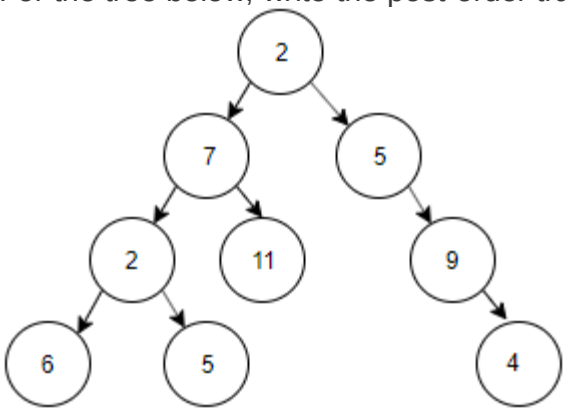
17. What is the time complexity of enqueue operation?
    a) O(logn)
    b) O(nlogn)
    c) O(n)
    d) O(1)

18. The following given tree is an example for?



    a) Binary tree
    b) Binary search tree
    c) Fibonacci tree
    d) AVL tree

19. For the tree below, write the post-order traversal.



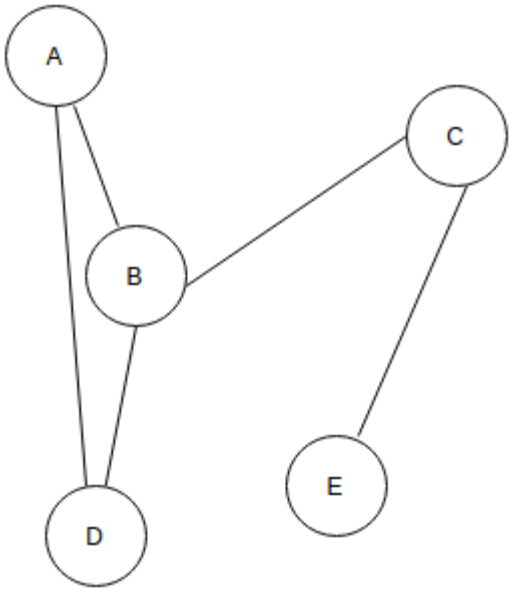
a) 2, 7, 2, 6, 5, 11, 5, 9, 4
b) 2, 7, 5, 2, 6, 9, 5, 11, 4
c) 2, 5, 11, 6, 7, 4, 9, 5, 2
d) 2, 7, 5, 6, 11, 2, 5, 4, 9

20. The post-order traversal of a binary tree is O P Q R S T. Then possible pre-order traversal will be _____
a) T Q R S O P
b) T O Q R P S
c) T Q O P S R
d) T Q O S P R

21. the case in which a key other than the desired one is kept at the identified location is called?
a) Hashing
b) Collision
c) Chaining
d) Open addressing

22. The task of generating alternative indices for a node is called?
a) Collision handling
b) Collision detection
c) Collision recovery
d) Closed hashing

23. In the given graph identify the cut vertices.



a) B and E
b) C and D
c) A and E
d) C and B

24. The number of elements in the adjacency matrix of a graph having 7 vertices is _____
a) 7
b) 14
c) 36
d) 49

25. For the given conditions, which of the following is in the correct order of increasing space requirement?
i) Undirected, no weight
ii) Directed, no weight
iii) Directed, weighted
iv) Undirected, weighted
a) ii iii i iv
b) i iii ii iv
c) iv iii i ii
d) i ii iii iv