

કુલ સમય :- : ૬૦ મીનીટ

કુલ પ્રશ્નો : ૫૦

વિદ્યાર્થીએ ટીક કરવાના પ્રશ્નો : ૩૫

નોંધ : વિદ્યાર્થીએ માત્ર ૩૫ પ્રશ્નો જ ટીક કરવાના રહેશે. જો વધારે ટીક કરેલ હશે તો પ્રથમ ૩૫ પ્રશ્નો જ ગણતરીમાં લેવામાં આવશે.

1. Define data structure...
A) Graph, image, music B) Facts, figures, and numbers C) Code, Graph D) None of the mentioned
2. What are type of data structure...?
A) Array, stack B) Primitive, non-primitive C) Stack, Tree D) None of the mentioned
3. What is a static structure?
A) Memory location are fixed at compile time B) Memory location change at compile time
C) Memory location are automatically change D) None of the mentioned
4. Which of the following is non-linear data structure?
A) Trees B) Stacks C) Strings D) All of the above
5. 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) Unordered list
6. How do you initialize an array?
A) $\text{Intarr}[3] = (1, 2, 3)$ B) $\text{Intarr}(3) = \{1, 2, 3\}$ C) $\text{Intarr}[3] = \{1, 2, 3\}$ D) $\text{Intarr}(3) = (1, 2, 3)$
7. Which of the following is not the type of queue?
A) Priority queue B) Circular queue C) Single ended queue D) Ordinary queue
8. Which of the following properties is associated with a queue?
A) First In Last Out B) First In First Out C) Last In First Out D) Last In Last Out
9. Stack is also called as
A) First in first out B) First in last out C) Last in last out D) Last in first out
10. Which of the following is not the type of queue?
A) Priority queue B) Circular queue C) Single ended queue D) Ordinary queue
11. In _____ search start at the beginning of the list and check every Element in the list.
A) Binary search B) Hash search C) Linear search D) Binary tree search
12. A binary tree is a rooted tree but not an ordered tree.
A) False B) True
13. _____ is not the operation that can be performed on queue.
A) Traversal B) Insertion C) Deletion D) Retrieval
14. The postfix from of $A*B+C/D$ is?
A) $*AB/CD+$ B) $AB*CD/+$ C) $A*BC+/D$ D) $ABCD+/*$
15. Tree is a....
A) Linear data structure B) Non-linear, non-primitive data structure C) Primitive data structure D) Non as the above
16. What is leaf node?
A) Degree one are called leaf nodes B) Degree zero are called leaf nodes
C) Degree four are called leaf nodes D) None as mentioned
17. What is a forest?
A) A set of joint trees B) A set of disjoint trees C) A set of binary trees D) None as the above
18. How many types of most degree in binary tree?
A) one degree B) two degree C) four degree D) three degree
19. Full binary tree have how many children?
A) 1 or two B) 0 or two C) 2 or more D) 3 or four
20. How to define a symbol of graph?
A) G B) H C) C D) B
21. Graph traversal is different from a tree traversal because...
A) Trees are not connected B) Graph may have loops C) Trees have root D) None is true as tree is a subset of graph
22. What is sorting?
A) Arranging items in up and down order B) Arranging items in left and right
C) Arranging items in ascending or descending order D) Arranging items are automatic
23. Which of the following is not a stable sorting algorithm in its typical implementation?
A) Insertion sort B) Merge sort C) Bubble sort D) Quick sort
24. What data structure is used for breadth first traversal of a graph?
A) Queue B) Stack C) List D) None as the above
25. What is Binary search?
A) Slow search a sorted array B) Faster way to search a sorted array
C) Quick search to longest array D) None as the above
26. Process of inserting an element in stack is called _____
A) Create B) Push C) Evaluation D) Pop

27. In a stack, if a user tries to remove an element from empty stack it is called _____.
 A) Underflow B) Empty collection C) Overflow D) Garbage Collection
28. What is the value of the postfix expression 6 3 2 4 + - *?
 A) 1 B) 40 C) 74 D) -18
29. The postfix form of $A*B+C/D$ is?
 A) $*AB/CD+$ B) $AB*CD/+$ C) $A*BC+/D$ D) $ABCD+/*$
30. Which data structure is needed to convert infix notation to postfix notation?
 A) Branch B) Tree C) Queue D) Stack
31. Linked list is considered as an example of _____ type of memory allocation.
 A) Dynamic B) Static C) Compile time D) Heap
32. In Linked List implementation, a node carries information regarding _____.
 A) Data B) Link C) Data and Link D) Node
33. Identify the infix expression from the list of options given below.
 A) $a/b+(c-d)$ B) $abc*+d+ab+cd+*ce-f-$ C) $ab-c-$ D) $+ab$
34. Evaluate the following statement using infix evaluation algorithm and choose the correct answer. $1+2*3-2$
 A) 3 B) 6 C) 5 D) 4
35. What is the other name for a postfix expression?
 A) Normal polish Notation B) Reverse polish Notation C) Warsaw notation D) Infix notation
36. Which of the following is an example for a postfix expression?
 $v\ a*b(c+d)$ B) $abc*+de-+$ C) $+ab$ D) $a+b-c$
37. _____ data structure is used when converting an infix notation to prefix notation?
 A) Stack B) Queue C) B-Trees D) Linked-list
38. The following given tree is an example for?
 A) Binary tree B) Binary search tree C) Fibonacci tree D) AVL tree
39. What is the traversal strategy used in the binary tree?
 A) depth-first traversal B) breadth-first traversal C) random traversal D) Priority traversal
40. For the tree below, FIND the pre-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
41. For the tree below, write the in-order traversal.
 A) 6, 2, 5, 7, 11, 2, 5, 9, 4 B) 6, 5, 2, 11, 7, 4, 9, 5, 2
 C) 2, 7, 2, 6, 5, 11, 5, 9, 4 D) 2, 7, 6, 5, 11, 2, 9, 5, 4
42. The number of edges from the root to the node is called _____ of the tree.
 A) Height B) Depth C) Length D) Width
43. What is an AVL tree?
 A) a tree which is balanced and is a height balanced tree B) a tree which is unbalanced and is a height balanced tree
 a tree with three children D) a tree with at most 3 children
44. What is a hash table?
 A) A structure that maps values to keys B) A structure that maps keys to values
 C) A structure used for storage D) A structure used to implement stack and queue
45. If several elements are competing for the same bucket in the hash table, what is it called?
 A) Diffusion B) Replication C) Collision D) Duplication
46. What is a hash function?
 A) A function has allocated memory to keys B) A function that computes the location of the key in the array
 C) A function that creates an array D) A function that computes the location of the values in the array
47. A graph with all vertices having equal degree is known as a _____.
 A) Multi Graph B) Regular Graph C) Simple Graph D) Complete Graph
48. A technique for direct search is
 A) Binary Search B) Linear Search C) Tree Search D) Hashing
49. Which of the following is not a stable sorting algorithm?
 A) Insertion sort B) Selection sort C) Bubble sort D) Merge sort
50. Which of the following searching techniques do not require the data to be in sorted form
 A) Binary Search B) Interpolation Search C) Linear Search D) All of the above