

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 Evaluate postfix string :  $623+-7*2\$2+$   
A. 51                      B. 47                      C. 49                      D. None of these
- 2 Two main measures for the efficiency of an algorithm are  
A. Processor and memory                      B. Time and space                      C. Complexity and capacity                      D. Data and space
- 3 Which is the recursive formula for sum of natural number problem?  
A.  $F(n) = F(n-1) + n$                       B.  $F(n) = F(n-1) * n$                       C.  $F(n) = F(n-2) + F(n-1)$                       D. None of these
- 4 In Algorithm comments begin with \_\_\_\_\_  
A. /\*                      B. /                      C. \*/                      D. //
- 5 ORD is stands for:  
A. Operation Restore Dequeue                      B. Output Restore Dequeue  
C. Output Restricted Dequeue                      D. None of these
- 6 Convert infix to postfix :  $A+B * C$   
A.  $AB+c*$                       B.  $ABC*+$                       C.  $ABC+*$                       D. None of these
- 7 Convert infix to prefix :  $P * Q / R$   
A.  $*/PQR$                       B.  $*PQ/R$                       C.  $/*PQR$                       D. None of these
- 8 The logical or mathematical model of a particular organization of data is called.....  
A. Data structure                      B. Data arrangement                      C. Data configuration                      D. Data formation
- 9 An elements of array are compared with mid elements. Such type of searching is called.....  
A. Binary Search                      B. Linear Search                      C. Two way search                      D. None of these
- 10 The complexity of merge sort algorithm is.....  
A.  $O(n)$                       B.  $O(n^2)$                       C.  $O(n \log n)$                       D.  $O(\log n)$
- 11 Which is not stack operation?  
A. Push                      B. Pop                      C. Pick                      D. None of these
- 12 \_\_\_\_\_ is the graphical solution for a given problem  
A. Flowchart                      B. Algorithm                      C. Program                      D. None of these
- 13 Stack is \_\_\_\_\_ data structure  
A. Last In First Out                      B. First In First Out                      C. Non linear                      D. None of these
- 14 Which is not queue application.  
A. Scheduling                      B. Simulation                      C. Reversal of string                      D. None of these
- 15 Which is stack application.  
A. Polish notation                      B. Tower of Hanoi                      C. Reversal of string                      D. All of these
- 16 Which method has less comparison?  
A. Binary search                      B. Linear search                      C. Both A & B                      D. None of these
- 17 Dequeue is stands for:  
A. Double equal queue                      B. Double ended queue                      C. Direct ended queue                      D. None of these
- 18 Which of the following case does not exist in complexity theory?  
A. Best case                      B. Worst case                      C. Average case                      D. Null case
- 19 Which is the recursive formula for factorial problem?  
A.  $F(n) = F(n-1) + n$                       B.  $F(n) = F(n-1) * n$                       C.  $F(n) = F(n-2) + F(n-1)$                       D. None of these
- 20 IRD is stands for:  
A. Invalid Restore Dequeue                      B. Input Restricted Dequeue  
C. Invalid Restricted Dequeue                      D. None of these
- 21 Which of the following data structures are indexed structures?  
A. Linear arrays                      B. Linked lists                      C. Queue                      D. Stack
- 22 Which of the following is non-linear data structure?  
A. Stacks                      B. List                      C. Strings                      D. Graph
- 23 \_\_\_\_\_ is the complexity of bubble sort method.  
A.  $O(n)$                       B.  $O(n^2)$                       C.  $O(\log n)$                       D. None of these
- 24 \_\_\_\_\_ is not the operation that can be performed on queue.  
A. Insertion                      B. Deletion                      C. Retrieval                      D. Traversal

- 25 Which is not recursive equation?  
A.  $F(n)=f(n-1) + n$  B.  $F(n)=f(n-1) * n$  C.  $F(n)=3n+25$  D. None of these
- 26 Radix sort is also called as..  
A. Random sort B. Pocket sort C. Tree sort D. None of these
- 27 Which searching method has more comparison?  
A. Linear search B. Binary search C. Two way search D. None of these
- 28 \_\_\_\_\_ is the data item which stores the address of another data item.  
A. Array B. Pointer C. Union D. None of these
- 29 Which equation is used to reduce distance in shell sort method?  
A.  $d = n / 2$  B.  $d = d / 2$  C.  $d = n * d / 2$  D. None of these
- 30 Which is non-primitive data structure?  
A. Pointer B. Array C. Int D. None of these
- 31 \_\_\_\_\_ is the process of step by step solution for a given problem.  
A. Asymptotic notation B. Algorithm C. Flowchart D. Program
- 32 Which method has less comparison?  
A. Bubble sort B. Selection sort C. Insertion sort D. All of these
- 33 How many passes are required in bubble sort method.  
A.  $n-1$  B.  $n = n / 2$  C. Total max. Number of digits D. None of these
- 34 What is complexity of binary search method.  
A.  $o(\log 2n)$  B.  $O(n^2)$  C.  $O(n)$  D. None of these
- 35 A function calls itself is called.....  
A. Polish Notation B. Non-Recursion C. Recursion D. None of these
- 36 Which is not type of array?  
A. One dimensional B. Two dimensional C. Three dimensional D. All of these
- 37 Which is not application of stack?  
A. Stack machine B. Tower of Hanoi C. Reversal of String D. Scheduling
- 38 Structure name is also referred to as.....  
A. Object B. Template C. Tag D. None of these
- 39 Which keyword is used to declare union.  
A. Union B. Declare C. Struct D. None of these
- 40 Which is not polish notation?  
A. Infix B. Prefix C. Postfix D. None of these
- 41 Which of the following data structure is linear type  
A. Graph B. Trees C. Binary Tree D. Stack
- 42 Which data structure is performed insertion and deletion operations at both ends.  
A. Dequeue B. Stack C. Array D. None of these
- 43 Set of vertices, set of edges that connect the nodes is called \_\_\_\_\_  
A. Linked list B. Tree C. Graph D. None of these
- 44 Which of the following data structure is non-linear type  
A. Array B. Stack C. Queue D. Tree
- 45 How many passes are required in radix sort method.  
A.  $n-1$  B.  $n = n / 2$  C. Total max. Number of digits D. None of these
- 46 Quick sort is also called as..  
A. Exchange sort B. Partition exchange sort C. Tree sort D. None of these
- 47 Which is FIFO data structure?  
A. Queue B. Stack C. Array D. None of these
- 48 Which is sequential search method?  
A. Binary search B. Linear search C. Both A & B D. None of these
- 49 Which is recursive mathematical equation for Fibonacci problem?  
A.  $f(n) = f(n) - n$  B.  $f(n) = f(n) * n$  C.  $f(n) = f(n-2) + f(n-1)$  D. None of these
- 50 What is the base value for factorial problem or  $0! =$  \_\_\_\_?  
A. 0 B. 1 C. N D. None of these