Paper Code : 3848

M C A Sem – III
JUL/SEP – 2021
INTRODUCTION TO ALGORITHM

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 ..... is the graphical solution for a given problem
A Flowchart B Algorithm C Program D None of these

2 ..... is the process of step by step solution for a given problem.
A Asymptotic notation B Algorithm C Flowchart D Program

3 A function calls itself is called.....
A Polish Notation B Non-Recursion C Recursion D None of these

4 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

5 What is complexity of binary search method?
A o(log n) B O(n) C o(n log n) D None of these

6 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

7 Which is not type of array?
A One dimensional B Two dimensional C Three dimensional D All of these

8 Which is not application of stack?
A Simulation B Tower of Hanoi C Reversal of String D None of these

9 Evaluate postfix string : 623+-
A 11 B 1 C 0 D None of these

10 Which is not polish notation?
A Ifix B Prefix C Postfix D None of these

11 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

12 In Algorithm comments begin with _____
A /* B / C */ D //

13 Convert infix to prefix : A+B * C
A +*ABC B +A*BC C *+ABC D None of these

14 Convert infix to postfix : P * Q / R
A PQR/* B PQR*/ C PQ*R/ D None of these

15 Convert infix to postfix : A+B * C
A AB+c* B ABC*+ C ABC+* D None of these

16 Convert infix to prefix : P * Q / R
A */PQR B *PQ/R C /*PQR D None of these

17 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

18 The complexity of quick sort algorithm is.....
A O(n) B O(n2) C O(n log n) D O(log n)

19 An elements of array are compared one by one. Such type of searching is called.....
A Binary Search B Linear Search C Two way search D None of these

20 Which of the following is non-linear data structure?
A Stacks B List C Strings D Graph

21 ..... is the complexity of bubble sort method.
A O(n) B O(n2) C O(log n) D None of these

22 Which of the following data structures are indexed structures?
A Linear arrays B Linked lists C Queue D Stack

23 Which is not recursive equation?
A F(n)=f(n-1) + n B F(n)=f(n-1) * n C F(n)=5n+2 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 sorting method has less comparison?
A Bubble sort B Selection sort C Insertion sort D None of these

26 Pocket sort is also called as..
A Random sort B Radix sort C Tree sort D None of these

27 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

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 of the following data structure is linear type
A Graph B Trees C Binary Tree D Stack

30 Which is not non-primitive data structure?
A Pointer B Array C Stack D None of these
31 Which of the following data structure is non-linear type
A Array B Stack C Queue D Tree
32 Partition exchange sort is also called as...
A Exchange sort B Quick sort C Tree sort D None of these
33 Which data structure is performed insertion and deletion operations at two different ends.
A Queue B Stack C Array D None of these
34 Set of vertices, set of edges that connect the nodes is called _____
A Linked list B Tree C Graph D None of these
35 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
36 Which is non-sequential search method?
A Binary search B Linear search C Both A & B D None of these
37 Which is FIFO data structure?
A Queue B Stack C Array D None of these
38 What is the base value for factorial problem or 0!=___?
A 0 B 1 C N D None of these
39 Which is not stack operation?
A Push B Pop C Pick D None of these
40 Which is stack application.
A Scheduling B Simulation C Reversal of string D None of these
41 Which method has more comparison?
A Binary search B Linear search C Both A & B D None of these
42 Stack is _____data structure
A Last In First Out B First In First Out C Non linear D None of these
43 Which is not queue application.
A Scheduling B Simulation C Reversal of string D None of these
44 Which of the following case does not exist in complexity theory.
A Best case B Worst case C Average case D Null case
45 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
46 Dequeue is stands for:
A Double equal queue B Double ended queue C Direct ended queue D None of these
47 Which data structure is to performed insertion at one end and deletion at both ends.
A Dequeue B IRD C ORD D None of these
48 Which data structure is used to performed insertion and deletion based on priority?
A Circular queue B ORD C IRD D None of these
49 Evaluate post fix string : 4 2 2 + -
A 8 B 2 C 0 D None of these
50 Which data structure is to performed insertion and deletion at both ends.
A Dequeue B IRD C ORD D None of these
