

Seat No.: **MARCH - 2022 (Summer session) Examination**

Subject Code: 83376

(विद्यार्थ्यांनी हा विषय कोड OMR वर लिहावा / Student should fill this code on OMR sheet)

Subject Name: Bachelor of Computer Application_83376_83376/84100 - Data Structure using C

C_03.08.2022_10.00 AM

Date: 03-08-2022

Time: 10:00:00 to 11:00:00

QP Code: 9555QP

(B.C.A.-II, Sem - III)

Total Marks : 50 Each Question 2 Marks, Total 25 Ques, Duration 1 Hr

1. Two main measures for the efficiency of an algorithm are _____.

- a. Processor and memory b. Complexity and capacity
c. Time and space d. Data and space

2. The time factor when determining the efficiency of algorithm is measured by _____.

- a. a. Counting microseconds b. Counting the number of key operations
c. Counting the number of statements d. Counting the kilobytes of algorithm

3. The complexity of Binary search algorithm is _____.

- a. $O(n)$ b. $O(\log n)$
c. $O(n^2)$ d. $O(n \log n)$

4. Which of the following data structure is linear data structure?

- a. Trees b. Graphs
c. Arrays d. None of above

5. Finding the location of the element with a given value is _____.

- a. Traversal b. Search
c. Sort d. None of above

6. Which operation is used to insert data in stack?

- a. Add b. Insert
c. Push d. Pop

7. Which of the following is the postfix expression?

- a. $A+B*C$ b. $+A*BC$
c. $ABC+*$ d. None of the above

8. Which operation is not used in queue?

- a. Create b. Insert
c. Delete d. Display



9. Queue is logically _____ type of list.

- a. FIFO
b. LIFO
c. FILO
d. Ordered way

10. If Queue is empty then Rear and Front value becomes _____.

- a. R=-1 F=1
b. R=-1 F=-1
c. R=0 F=0
d. R=1 F=-1

11. If Stack is empty then top value becomes _____.

- a. top=0
b. top=1
c. top=-1
d. top=2

12. Which of the following operator having higher precedence.

- a. ^
b. +,-
c. *,/
d. (), {}, []

13. In the stack, which element will be deleted?

- a. Top element
b. Bottom Element
c. Head Element
d. Tail Element

14. Traversal is process of _____.

- a. Arranging all data items in a data structure in particular way.
b. Partitioning single list to multiple list
c. Visiting each and every node of a list in systematic manner.
d. Combining the data items of two different list into one.

15. Data means _____.

- a. Unprocessed information.
b. Computer Input
c. Manipulated Input
d. Processed Information

16. How to initialize array in C?

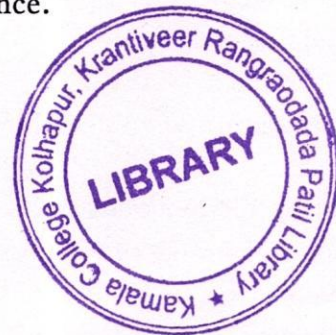
- a. `int arr[10]=(1,2,3,4,5,6,7,8,9,10);`
b. `int arr(10)=(1,2,3,4,5,6,7,8,9,10);`
c. `int arr(10)={ 1,2,3,4,5,6,7,8,9,10};`
d. `int arr[10]={ 1,2,3,4,5,6,7,8,9,10};`

17. Which of the following statement is false?

- a. Arrays are dense lists and static data structure
b. Data elements in linked list need not be stored in adjacent space in memory
c. Pointers store the next data element of a list
d. Linked lists are collection of the nodes that contain information part and next pointer

18. Which of the following is two way list?

- a. grounded header list
b. circular header list
c. linked list with header and trailer nodes
d. none of above



19. What is the worst case complexity of bubble sort?

- a. $O(n \log n)$
- b. $O(\log n)$
- c. $O(n)$
- d. $O(n^2)$

20. Which of the following sort uses divide and conquer strategy?

- a. Bubble Sort
- b. Merge Sort
- c. Insertion Sort
- d. Selection Sort

21. _____ is a collection of similar elements where each element points to next element.

- a. Queue
- b. Linked list
- c. Stack
- d. Tree

22. At which position we have to insert element?

- a. At beginning of linked list
- b. At the end of linked list
- c. At the specified position in linked list
- d. All of above

23. _____ Function Used to clear the memory in linked list

- a. delete
- b. drop
- c. free
- d. clear

24. $\text{sizeof}(\text{node})$ is used to calculate _____.

- a. Total number of elements in the linked list
- b. Total number of nodes in the linked list
- c. Size of all nodes in linked list
- d. Size of one node in linked list

25. When inorder traversing a tree resulted E A C K F H D B G; the preorder traversal would return _____.

- a. FAEKDCDBHG
- b. FAEKCDHGB
- c. EAFKHDCBG
- d. FEAKDCHBG

