

# data-structure-ds-set-1 (mcqmate.com).pdf

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Data Structure (DS) MCQs [set-1]

1. Which if the following is/are the levels of implementation of data structure

- A. abstract level
- B. application level
- C. implementation level
- D. all of the above

Answer: D

2. A binary search tree whose left subtree and right subtree differ in hight by at most 1 unit is called .....

- A. avl tree
- B. red-black tree
- C. lemma tree
- D. none of the above

Answer: A

3. Stack is also called as

- A. last in first out
- B. first in last out
- C. last in last out
- D. first in first out

Answer: A

4. .... is not the component of data structure.

- A. operations
- B. storage structures
- C. algorithms
- D. none of above

Answer: D

5. Which of the following is not the part of ADT description?

- A. data
- B. operations
- C. both of the above
- D. none of the above

Answer: D

6. .... Is a pile in which items are added at one end and removed from the

other.

- A. stack
- B. queue
- C. list
- D. none of the above

Answer: B

7. .... is very useful in situation when data have to stored and then retrieved in reverse order.

- A. stack
- B. queue
- C. list
- D. link list

Answer: A

8. Which data structure allows deleting data elements from and inserting at rear?

- A. stacks
- B. queues
- C. dequeues
- D. binary search tree

Answer: B

9. Which of the following data structure can't store the non-homogeneous data elements?

- A. arrays
- B. records
- C. pointers
- D. stacks

Answer: A

10. A ..... is a data structure that organizes data similar to a line in the supermarket, where the first one in line is the first one out.

- A. queue linked list

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- B. stacks linked list
- C. both of them
- D. neither of them

Answer: A

11. Which of the following is non-liner data structure?

- A. stacks
- B. list
- C. strings
- D. trees

Answer: D

12. Herder node is used as sentinel in .....

- A. graphs
- B. stacks
- C. binary tree
- D. queues

Answer: C

13. Which data structure is used in breadth first search of a graph to hold nodes?

- A. stack
- B. queue
- C. tree
- D. array

Answer: B

14. Identify the data structure which allows deletions at both ends of the list but insertion at only one end.

- A. input restricted dequeue
- B. output restricted dequeue
- C. priority queues
- D. stack

Answer: A

15. Which of the following data structure is non linear type?

- A. strings
- B. lists

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- C. stacks
- D. graph

Answer: D

16. Which of the following data structure is linear type?

- A. graph
- B. trees
- C. binary tree
- D. stack

Answer: D

17. To represent hierarchical relationship between elements, Which data structure is suitable?

- A. dequeue
- B. priority
- C. tree
- D. graph

Answer: C

18. A directed graph is ..... if there is a path from each vertex to every other vertex in the digraph.

- A. weakly connected
- B. strongly connected
- C. tightly connected
- D. linearly connected

Answer: B

19. In the ..... traversal we process all of a vertex's descendants before we move to an adjacent vertex.

- A. depth first
- B. breadth first
- C. with first
- D. depth limited

Answer: A

20. The number of comparisons done by sequential search is .....

- A.  $(n/2)+1$

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- B.  $(n+1)/2$
- C.  $(n-1)/2$
- D.  $(n+2)/2$

Answer: B

21. In ....., search start at the beginning of the list and check every element in the list.

- A. linear search
- B. binary search
- C. hash search
- D. binary tree search

Answer: A

22. Which of the following is not the internal sort?

- A. insertion sort
- B. bubble sort
- C. merge sort
- D. heap sort

Answer: C

23. A graph is said to be ..... if the vertices can be split into two sets V1 and V2 such there are no edges between two vertices of V1 or two vertices of V2.

- A. partite
- B. bipartite

C. rooted

D. bisects

Answer: B

24. In a queue, the initial values of front pointer f and rear pointer r should be ..... and ..... respectively.

A. 0 and 1

B. 0 and -1

C. -1 and 0

D. 1 and 0

Answer: B

25. In a circular queue the value of r will be ..

A.  $r=r+1$

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B.  $r=(r+1) \% [\text{queue\_size} - 1]$

C.  $r=(r+1) \% \text{queue\_size}$

D.  $r=(r-1) \% \text{queue\_size}$

Answer: C

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