DATA STRUCTURES & ALGORITHMS BASED COMPUTER MCQ PRACTICE QUESTIONS AND ANSWERS PDF WITH EXPLANATION

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Created By Careericons Team

Q1. When converting binary tree into extended binary tree, all the original nodes in binary tree are

- a) internal nodes on extended tree
- b) external nodes on extended tree
- c) vanished on extended tree
- d) None of the above

Q2. Which of the following is not a limitation of binary search algorithm ?

- a) binary search algorithm is not efficient when the data elements are more than 1000.
- b) must use a sorted array
- c) requirement of sorted array is expensive when a lot of insertion and deletions are needed
- d) there must be a mechanism to access middle element directly

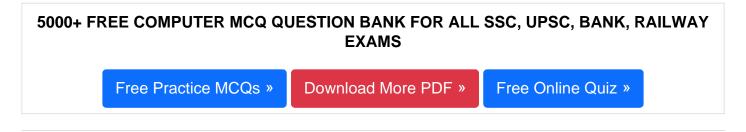
Q3. This data structure allows deletions at both ends of the list but insertion at only one end.

- a) Input-restricted deque
- b) Output-restricted deque
- c) Priority queues
- d) None of the above

Q4. Each array declaration need not give, implicitly or explicitly, the information about the

a) name of array

- b) data type of array
- c) first data from the set to be stored
- d) index set of the array



Q5. The operation of processing each element in the list is known as

- a) Merging
- b) Inserting
- c) Traversal
- d) All the above

Q6. The complexity of Binary search algorithm is

- a) O(n)
- b) O(log)
- c) O(n log n)
- d) None of the above

Q7. The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal

- a) ABFCDE
- b) ADBFEC
- c) ABDECF
- d) None of the above

Q8. The complexity of merge sort algorithm is

- a) O(n)
- b) O(log n)
- c) O(n log n)
- d) None of these

Q9. The depth of a complete binary tree is given by

- a) D _n = n log ₂ n
- b) $Dn = {_n \log_2 n+1}$
- c) D $_n = \log_2 n$
- d) D _n = $\log_2 n+1$

Q10. In a graph if e=(u, v) means

- a) e begins at u and ends at v
- b) u is processor and v is successor
- c) both B and C are true
- d) none is true

Q11. A variable P is called pointer if

- a) P points to the address of first element in DATA
- b) P can store only memory addresses
- c) P contain the DATA and the address of DATA
- d) P contains the address of an element in DATA.

Q12. When new data are to be inserted into a data structure, but there is no available space; this situation is usually called

- a) Housefull
- b) Saturated
- c) Underflow

d) Overflow



- Q13. The following data structure store the homogeneous data elements
- a) Arrays
- b) Records
- c) Pointers
- d) None of the above

Q14. The following name does not relate to stacks

- a) FIFO lists
- b) LIFO list
- c) Piles
- d) Push-down lists

Q15. The space factor when determining the efficiency of algorithm is measured by

- a) Counting the maximum memory needed by the algorithm
- b) Counting the minimum memory needed by the algorithm
- c) Counting the average memory needed by the algorithm
- d) Counting the maximum disk space needed by the algorithm

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Answers to the above questions :

Q1. Answer: (a)

Q2. Answer: (a)

Q3. Answer: (a)

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Q4. Answer: (c)

Q5. Answer: (c)

Q6. Answer: (b)
Q7. Answer: (c)
Q8. Answer: (c)
Q9. Answer: (d)
Q10. Answer: (c)
Q11. Answer: (d)
Q12. Answer: (d)
Q13. Answer: (b)
Q14. Answer: (a)
Q15. Answer: (a)

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