

G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY

(I B.Tech-II Sem- II-MID objective, Branch: CSE)

Subject: DS

Max. Marks: 10 M

Time : 20 Minutes

Date : 10-5-17

Roll No: _____ Invigilator Signature: _____

Answer all questions

- 1.The time complexity of linear search in worst case is []
(A) $O(n)$ (B) $O(\log n)$ (C) $O(n^2)$ (D) none
- 2.The time complexity of binary search is []
(A) $O(n)$ (B) $O(\log n)$ (C) $O(n^2)$ (D) none
- 3.The time complexity of insertion sort in average case and worst case is same [TRUE/FALSE]
4. The time complexity of bubble sort in average case is []
(A) $O(n)$ (B) $O(\log n)$ (C) $O(n^2)$ (D) none
5. Quick sort is also called as []
(A)Partition exchange sorting (B)Exchange sorting (C) Both a and b(D)none
6. Selection sort is also called []
(A)Push down sorting (B) Pushdown automata (C) Both and b (D) none
- 7.Which of the following is based on divide and conquer []
(A)Binary search (B)merge sort(C)quick sort (D) none
8. Number of comparisons are less in binary insertion sort when compared with straight insertion sort [TRUE/FALSE]
9. DFS graph traversal is based on []
(A) Stack (B) Queue (C) Linear queue (D) all
10. BFS graph traversal is based on []
(A) Stack (B) Queue (C) Linear queue (D) all
- 11.A complete graph with 5 vertices consists of --- edges []
(A) 10 (B) 20 (C) 25 (D) none
- 12.Floyd's algorithm is based on []
(A) Divide and conquer (B) Greedy method
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14. Warshall's algorithm is based on []

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15. In quick sort the pivot element divides the list into two equal parts [TRUE/FALSE]

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- (A) -1 or 0 or +1 (B) -1 or 0 or +2
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- (A) $O(n)$ (B) $O(\log n)$ (C) $O(n^2)$ (D) $O(n \log_2 n)$

18. The time complexity of binary search depends on the sorting technique Used to arrange it in ascending order [TRUE/FALSE]

19. How many distinct binary search trees can be created out of 4 distinct keys? []

- (A) 5 (B) 14 (C) 24 (D) 42

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