

B.Tech. (Sixth Semester, New AICTE) Online Examination-2022

(Computer Science & Engineering)

Subject-CS06TPC011 Design and Analysis of Algorithm

Time allowed: Two hours

Maximum Marks: 70

Note:- There are only short answer type questions. Attempt any three questions from UNIT 1,2,3 and 4 and from UNIT 5, attempt only two questions, each question carries equal marks i.e. 5 marks. Assume data if required.

Unit-I

1. What is space complexity?
2. Explain the little oh asymptotic notation.
3. Write at least three differences between master theorem and recursive tree method?
4. What is Recurrences equation?

Unit-II

5. Write only an algorithm of quick sort with recursive function.
6. What is knapsack problem?
7. Write an algorithm of Strassen's Matrix multiplication.
8. Write an algorithm of Minimum Spanning trees- kruskal's algorithm.

Unit-III

9. Explain dynamic technique.
10. Write an algorithm of BFS.
11. What is the topological sorting?
12. What is a strongly connected component?

Unit-IV

13. What is heap sort?
14. Explain the graph coloring.
15. Write at least three differences between branch and bound and dynamic programming.

16. What is planner graph?

Unit-V

17. What is the NP problem?

18. What is the Verification algorithm?

19. Explain the Cook Levin theorem.