

APRIL/MAY 2019

**BSSC33 — DESIGN AND ANALYSIS OF  
ALGORITHM**

Time : Three hours

Maximum : 75 marks

**SECTION A — (10 × 2 = 20 marks)**

Answer ALL questions.

All questions carry equal marks.

1. What is recursive function?
2. What do you mean by Time Complexity?
3. List any two advantages of Dived and Conquer method.
4. What is the difference between Merge sort and Quick sort/
5. What does Job sequencing with deadline mean?
6. What is Knapsack problem?
7. Define Multistage Graph.
8. List various features of Dynamic Programming
9. What do you mean by Backtracking?
10. Define Hamiltonian Circuit.





SECTION B — ( $5 \times 5 = 25$  marks)

Answer ALL questions

11. (a) Write short notes on Analysis of an Algorithm.

Or

- (b) Describe about Recursive algorithm with example.

12. (a) List out the steps involved in Strassen's method.

Or

- (b) Write an algorithm for straight forward Maximum and Minimum.

13. (a) Write short notes on Optimal Merge pattern problem.

Or

- (b) Describe the Greedy algorithm to generate Shortest Path in detail.

14. (a) Write a general procedure for Dynamic Programming.

Or

- (b) Write short notes on Reliability design.

15. (a) Write and explain the Binary Tree algorithms with example.

Or

- (b) Write an algorithm for Sum of subsets problem.



SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions

16. Briefly explain the four distinct study area of Algorithm.

17. Discuss in detail about Merge Sort with example.

18. Explain Prim's and Kruskal's algorithm with an example.

19. Discuss 0/1 Knapsack problem in detail.

20. Explain the Breadth First Search Traversal with an example