

AU-278

M.Sc. (Part—I) Semester—I (C.B.C.S. Scheme) Examination
COMPUTER SOFTWARE (Old)
(Upto Winter-2018)
(Design and Analysis of Algorithm)

Paper—I

Time : Three Hours]

[Maximum Marks : 80

Note :—(1) Illustrate your answer with the help of neat sketches wherever necessary.

(2) Assume suitable data wherever required.

1. (A) State and explain selection sort with example. 8
- (B) Write an algorithm for merge sort. 8

OR

2. (A) Describe the Quick Sort in detail. 8
- (B) Explain Strassen's matrix multiplication with example. 8
3. (A) What is Knapsack problem ? Explain. 8
- (B) Explain single source shortest path. 8

OR

4. (A) Explain optimal merge pattern with example. 8
- (B) Describe job sequencing problem with example. 8
5. (A) Write algorithm for 0/1 Knapsack problem. 8
- (B) What is meant by Reliability Design ? Explain. 8

OR

6. (A) Explain multistage graph with example. 8
- (B) What is scheduling ? Explain flow shop scheduling. 8

7. (A) What is AND/OR graph ? Explain with example. 8
(B) Explain :
(i) Bi-connected components
(ii) DFS. 8

OR

8. (A) What is meant by Game Trees ? Explain. 8
(B) Explain code optimization in detail. 8
9. (A) Explain 8 queen problem with example. 8
(B) What is Hamiltonian cycle ? Explain. 8

OR

10. (A) Explain sum of subsets with example. 8
(B) Explain N-Queen problem with example. 8