

S.NO: 22N1- PCS

Course Code: PGXB

A.D.M.COLLEGE FOR WOMEN, NAGAPATTINAM

(AUTONOMOUS)

M.Sc (Computer Science) Degree Examination

I Semester – November – 2022

CC II – DESIGN AND ANALYSIS OF ALGORITHMS

Time: 3 hours

Maximum Marks: 75

Section -A

10X2=20

Answer **ALL** the Questions

1. What is an algorithm?
2. Differentiate cyclic and acyclic graph.
3. Define merge sort.
4. Write about divide and conquer strategy.
5. Comment on Mean Retrieval Time.
6. What is mean by feasible solution?
7. Define the term depth first search.
8. Write about flow shop scheduling.
9. State the planner graph.
10. List any two applications of backtracking.

Section -B

5X5=25

Answer **ALL** the Questions

11. a) Write an algorithm for PUSH and POP operations on stack.

(or)

b) How to measure the performance of an algorithm? Discuss.

12. a) Explain the use of divide and conquer techniques for binary search.

(or)

b) Discuss about quick sort algorithm and explain with example.

13. a) Analyze the single source shortest path problem with example.

(or)

b) Describe the job sequencing with deadlines.

14. a) Interpret the optimal binary search tree with example.

(or)

b) Elaborate note on multistage graph with example.

15. a) Determine the sum of subset problem with example.

(or)

b) Describe the Hamiltonian cycle problem.

Section -C

3 X 10 = 30

Answer any **THREE** Questions

16. Summarize the concept of tree and its operations.
17. Describe the minimum and maximum procedure using divide and conquer method.
18. Explain minimum cost spanning tree algorithm with suitable example.
19. Demonstrate the travelling salesman problem.
20. Illustrate the 8-Queen problem using backtracking.

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