22P258 (Pages: 2) Name: .....

Reg.No: .....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2023

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P CSS2 C06 - DESIGN AND ANALYSIS OF ALGORITHMS

(Computer Science)

(2019 Admission onwards)

Time : 3 Hours Maximum : 30 Weightage

Part-A

Answer any ***four*** questions. Each question carries 2 weightage.

1. Identify the Four Major Stages of Algorithm Analysis and Design.
2. Illustrate divide and conquer method.
3. Illustrate Knapsack problem.
4. Criticize Time and Space complexity.
5. Debate the difference between BigOh and Big Omega notation.
6. Describe Clique.
7. Analyse parallel computing. Why do we use it?

(4 × 2 = 8 Weightage)

Part-B

Answer any ***four*** questions. Each question carries 3 weightage.

8. Recite PRAM model in detail.
9. Illustrate Dynamic Programming.
10. Demonstrte the backtracking designing tehnique.
11. Assess Master’s theorem. Find the complexity of the recurrence relation.
12. Critique Strassen’s Matrix Multiplication algorithm with an example.
13. Describe the difference between NP Complete problems and NP Hard problems.
14. Analyse speed up, scalability and Amdhal's law.

(4 × 3 = 12 Weightage)

Part-C

Answer any ***two*** questions. Each question carries 5 weightage.

15. List out different problems types.

16. Demonstrate different algorithm design techniques.

17. Assess different ratio theorems.

18. Criticize different methods to solve recurrence equations.

(2 × 5 = 10 Weightage)

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