20P264 (Pages: 1) Name: ….……

Reg. No: ……..

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021

(CUCSS - PG)

(Regular/Supplementary/Improvement)

CC19P CSS2 C06 - DESIGN AND ANALYSIS OF ALGORITHMS

(Computer Science)

(2019 Admission onwards)

Time: Three Hours Maximum: 30 Weightage

Part A

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

1. List the parameters that affect the calculation of a programs' running time.
2. Write short note on RAM Model.
3. State the purpose of Prim's algorithm.
4. Differentiate between BigOh and Big Omega notation?
5. What is Master's theorem in DAA?
6. Write short note on Geometric Problems.
7. Explain the use of Substitution Method.

(4 × 2 = 8 Weightage)

Part B

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

8. Describe briefly about Euler tour technique.
9. Differentiate between Time and Space Complexity.
10. State the advantages of Merge sort.
11. How Big Omega and Little Omega calculations takes place in algorithm analysis?
12. Discuss on Greedy Algorithm.
13. Give short note on Travelling sales man problem.
14. Give some examples for divide and conquer method.

(4 × 3 = 12 Weightage)

Part C

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

15. Explain Strassen's matrix multiplication with an example.
16. Describe about the basic concepts of NP-Complete and NP-Hard problems.
17. Explain Divide and Conquer approach.
18. Explain any four important problem types in DAA.

(2 × 5 = 10 Weightage)

****