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MASTER OF COMPUTER APPLICATIONS
(Specialization in Cloud Technology)
EXAMINATION :MAY - 2024
SEMESTER - II
Sub: Design and Analysis of Algorithms (MCCL 23-201)

Date :22/05/2024

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instruction:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagram wherever necessary.

Q.1. Answer the following in 2-3lines. (Any 5) (10)

1. What is Algorithm?
2. Define time complexity.
3. What is Divide and Conquer?
4. What is Greedy Method?
5. What is Dynamic Programming?
6. What is Dijkstra's Algorithm?
7. What is Backtracking?

Q. 2. Answer the following in short. (Any 4) (20)

1. Write an algorithm of finding the Fibonacci series till the term less than 1000.
2. Write an algorithm of multiplication of three numbers.
3. What are the advantage and disadvantage of divide and conquer?
4. What are characteristics of Greedy method?
5. Write an algorithm of Knapsack Problem.
6. How does dynamic programming work?

Q. 3. Answer the following in detail. (Any 3) (30)

1. Write an algorithm of Merge sort.Explain the working of merge sort algorithm.
2. Write an algorithm of Job sequencing with deadlines. Explain with an example.
3. Explain working of Heap sort Algorithm.
4. Write an algorithm of Dijkstra's Algorithm.Explain how Dijkstra's Algorithm works
5. Write an algorithm of Graph coloring. Explain how Graph coloring works.
