ECHELON INSTITUTE OF TECHNOLOGY, FARIDABAD

Department of Computer Application

Analysis And Design of Algorithms

Course: MCA 2nd Sem **Session: Jan-May 2024**

Date of Issue: 20/2/2024 **Date of Submission: 22/2/2024**

Course Unit included: 1 **Max. Marks:** 30

Code: **MCA-20-102**

Assignment No. 1

Learning Outcomes:

a. Analyze and compare complexity for different types of algorithms for different types of problems and apply mathematical preliminaries to the analyses and design stages of different types of algorithms.

b. Apply different types of data structures, analyze the best one for different types of problems and recognize the general principles and good algorithm design techniques for developing efficient computer algorithms.

c. Analyze on the suitability of a specific algorithm design technique for a given problem.

d. Implement efficient algorithms for new situations, using as building blocks the techniques learned and apply algorithm design techniques to solve certain NP-complete problems.

QUESTIONS

Q1. What do you understand about big-O notation? (5 marks)
Q2. What are the steps involved in designing a good algorithm? (5 marks)
Q3. Explain space complexity and show how it can be calculated with an example? (5 marks)
Q4. Which factors should be kept in mind when analyzing an algorithm's complexity? (5 marks)
Q5. Explain graphs and their representations with the help of a diagram? (5 marks)
Q6. What are some common sorting algorithms? (5 marks)

Course Outcome Evaluation Matrix:

COs	**Assignment Questions**					
CO-1	Q1	Q2	Q3	Q4	Q5	Q6
CO-2						
CO-3						
CO-4						

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