

GANPAT UNIVERSITY

U.V PATEL COLLEGE OF ENGINEERING

Computer Engineering / Information Technology Department

First Internal Exam Syllabus of

2CEIT402: Design and Analysis of Algorithms

Sr. No.	Syllabus Topic Name
1	Chapter 1: Introduction: <ul style="list-style-type: none">• Definition and characteristics of an algorithm• Problems & instances• Best, Average and Worst case analysis• Need to look for efficiency
2	Chapter 2: Analysis of Algorithms: <ul style="list-style-type: none">• Performance analysis (time & space complexity)• Growth of functions• Asymptotic notations (Big-oh, Omega and Theta)• Sorting Algorithms and analysis (Bubble sort, Selection sort, Insertion sort)
3	Chapter 3: Solving Recurrences: <ul style="list-style-type: none">• Homogeneous recurrences
4	Chapter 5: Graph Algorithms <ul style="list-style-type: none">• Introduction of Graph• Types of Graph• Graph Traversal Technique• Topological order of Graph• Introduction of Backtracking• Application of Backtracking• Advantage and disadvantage of Backtracking• N-Queen problem
5	Chapter 6: Greedy Algorithms <ul style="list-style-type: none">• Introduction of greedy algorithm• Characteristics of Greedy algorithm• Greedy Knapsack problem• Job Sequence with Deadline