**Analysis of Algorithms (CSE212)**

**Module 5-LIMITATIONS OF ALGORITHM & BACKTRACKING**

**Question Bank**

1. What do you mean by Lower bound of an algorithm? Explain the different methods of obtaining the lower bound with examples.
2. What are decision trees? Obtain the decision tree to sort the elements using Insertion sort and show that the lower bound is log2n!. Also show that the asymptotic behavior nlogn.
3. What are tractable and Intractable problems?
4. Explain P Class, NP Class, NP Hard Class and NP Complete Class problems with example.
5. What is Backtracking? What are the various problems that can be solved using Backtracking?
6. What is state space tree? Give the state space tree for solving 4 Queens problem for atleast one solution.
7. What is N-Queens Problem? Write the algorithm for N Queens Problem.
8. What is state space tree? Give the state space tree for solving 8 Queens problem for atleast one solution.

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**\*\*\*\*\* Happy Learning \*\*\*\*\***