**UNIT 3**

**BACKTRACKING**

1. **What is backtracking? Explain with the help of example**
2. **What is four Queen Problem ? with example**
3. **What is NxN queen problem? Write its solution step by step or write its algorithm and discuss its complexity (do its numerical)**
4. **Explain Hamiltonian path and Hamiltonian cycle problem ?**
5. **What is subset sum problem (do its numerical)and write its algorithm .Explain with the help of example.**
6. **What is graph coloring problem?**
7. **6 (b) in may 2016**

**BRANCH and BOUND**

1. **What is Branch and Bound explain with the help of example**
2. **Explain different Types of Techniques used in Branch and Bound**
3. **What is TSP(TRAVELING SALESMAN PROBLEM) and solve TSP using Branch and Bound**
4. **What is 0/1 Knapsack Problem .Solve it using BB(Branch and Bound). Or 7 (b) in may 2017 or 7 in 2018**

**UNIT 4**

1. **What is P,NP , NPC, NP-Hard problems explan with the help of example ?**
2. **Prove COOK’S Theorem**
3. **Prove that SAT, CIRCUIT SAT, 3- CNF SAT, CLIQUES, SUBSET SUM, VERTEX COVER ,HAMILTONIAN CYCLE, TSP is NP COMPLETE**
4. **Prove that Scheduling problem with deadline is is NP COMPLETE**

**Please do the numerical from last year papers and from my notes**