**Tutorial 14**

**Greedy approach, Backtracking**

**Instructions**

1. All tutorial sheets will be posted on the Google Classroom.

2. Students are advised to submit tutorial sheets solutions in classroom.

Q1. Find the optimal solution for the fractional knapsack problem making use of greedy approach. Consider- n = 5, w = 60 kg

(w1, w2, w3, w4, w5) = (5, 10, 15, 22, 25)

(b1, b2, b3, b4, b5) = (30, 40, 45, 77, 90)

Q2. Write a program to implement minimum coin exchange problem. Compute the minimum no. of coins to be exchanged for the following:

coin[] = {25,20,10,5}

value = 70

Q3. What is backtracking? Explain with the help of an example and using state space tree.

Q4. Draw the state space tree for 4X4 queen problem. Write the code to implement n-queen problem.

Q5. What is the difference between Hamiltonian graph, path , circuit explain with an example.

Q6. Which of the following is / are Hamiltonian graphs?

