**2CS503 Design and Analysis of Algorithms**

**Tutorial 3: Recurrences**

Q-1 Obtain the total solutions of the following recurrence relations:-

1. T(n) – 4T(n-1) + 4T(n-2) = 0
2. T(n) – 5T(n-1) + 6T(n-2) = 0
3. T(n) + 5T(n-1) + 6T(n-2) = 3n2 – 2n + 1

Q-2 Solve the following by using Recursion tree method:-

1. T(n) = 3T(n/4) + n2
2. T(n) = 4T(n/3) + n
3. T(n) = 4T(n/2) + n