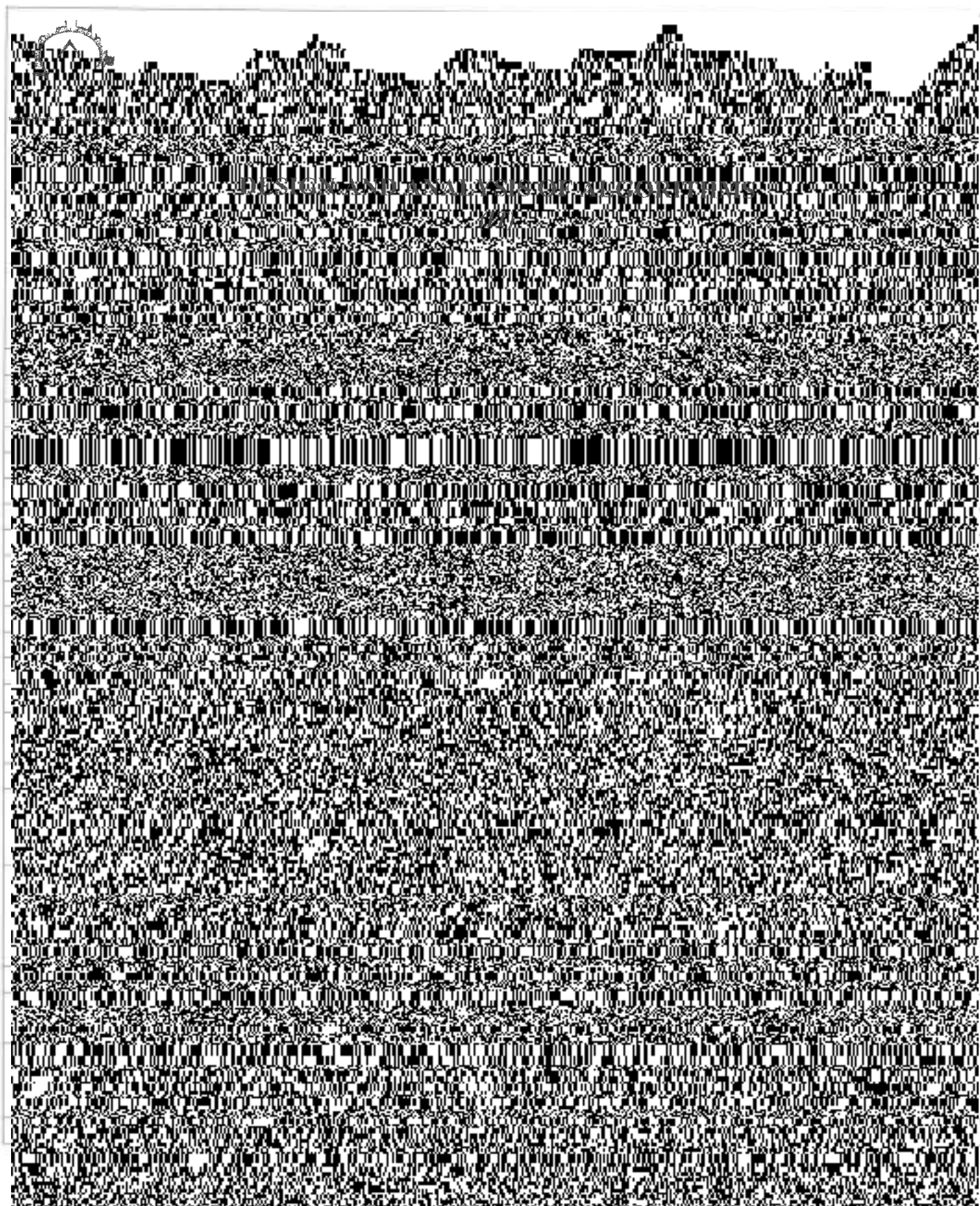
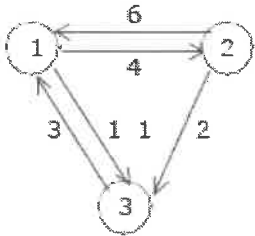




7	What is the minimum spanning tree and discuss about the prim's and kruskal algorithms with suitable examples.	10M	CO3	L2
8	Consider four elements a_1, a_2, a_3 and a_4 with $Q_0 = 1/8, Q_1 = 3/16, Q_2 = Q_3 = Q_4 = 1/16$ and $p_1 = 1/4, p_2 = 1/8, p_3 = p_4 = 1/16$. Construct an optimal binary search tree. Solving for $C(0, n)$.	10M	CO4	L3
OR				
9	Given a weighted digraph $G = (V, E)$ with weight. Determine the length of the shortest path between all pairs of vertices in G. Here we assume that there are no cycles with zero or negative cost. 	10M	CO4	L3
10	Discuss Draw the portion of state space tree generated by FIFOBB for the following instance of 0/1 knapsack $M = 15, n = 4, (P_1, P_2, P_3, P_4) = (10, 10, 12, 18)$ and $(w_1, w_2, w_3, w_4) = (2, 4, 6, 9)$.	10M	CO5	L3
OR				
11	a) State and prove that Cook's theorem. b) What is a non-deterministic Turing machine (NDTM)? How does it operate, and in what way is it different from a deterministic Turing machine?	6M 4M	CO5 CO5	L2 L3