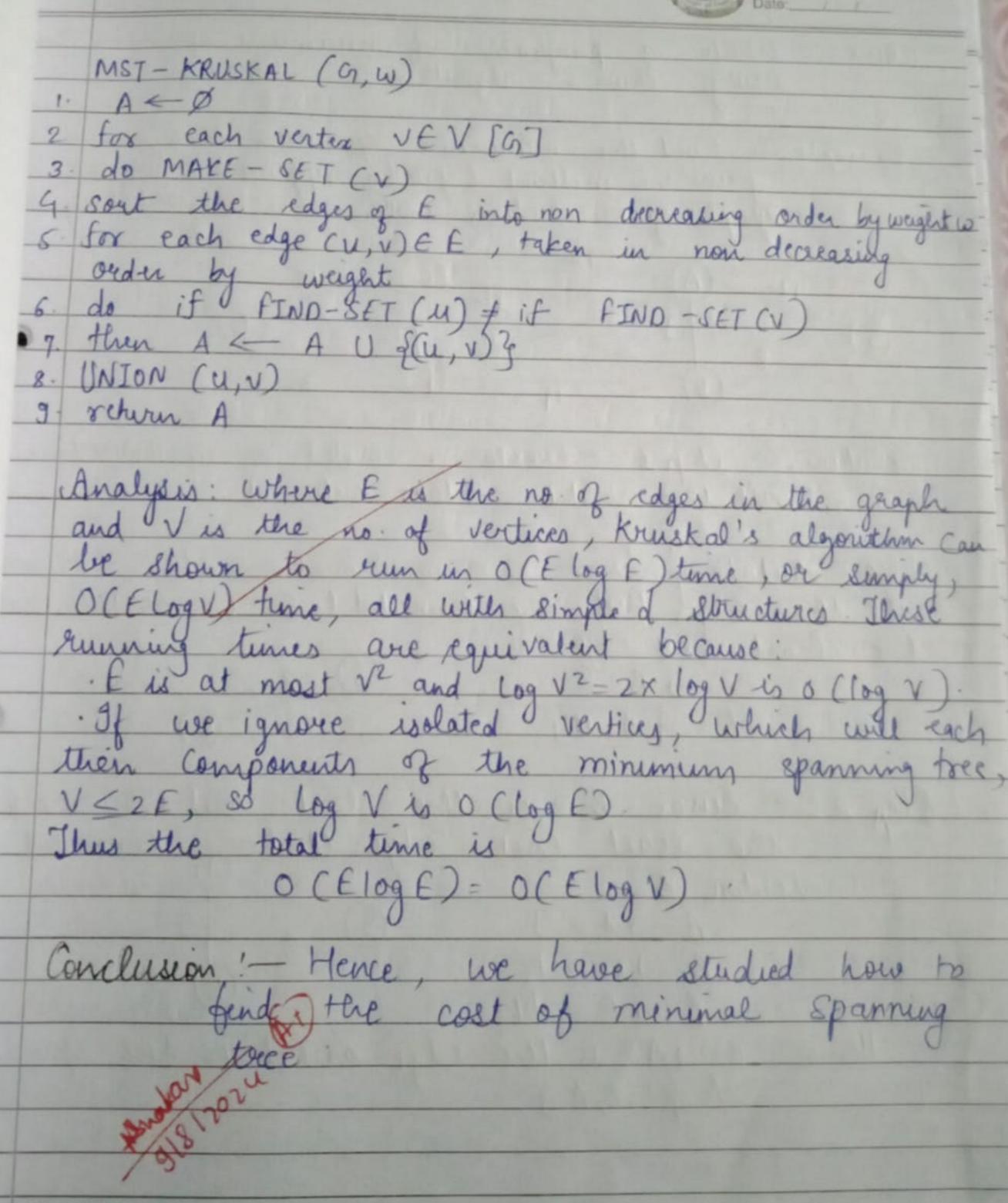
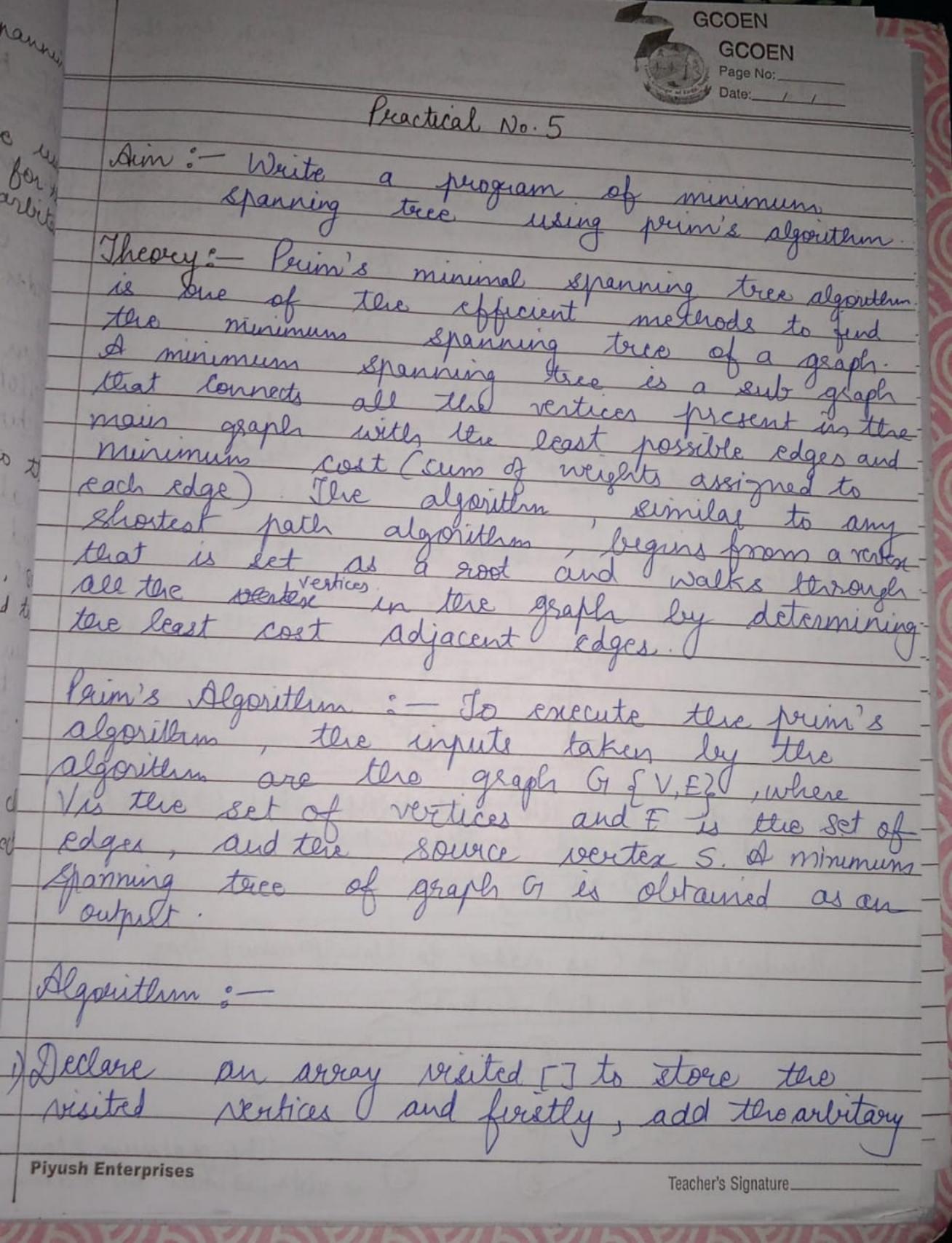
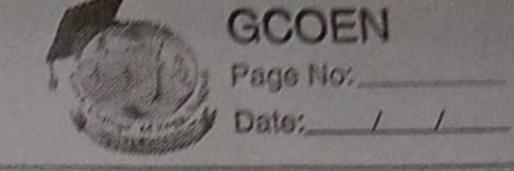
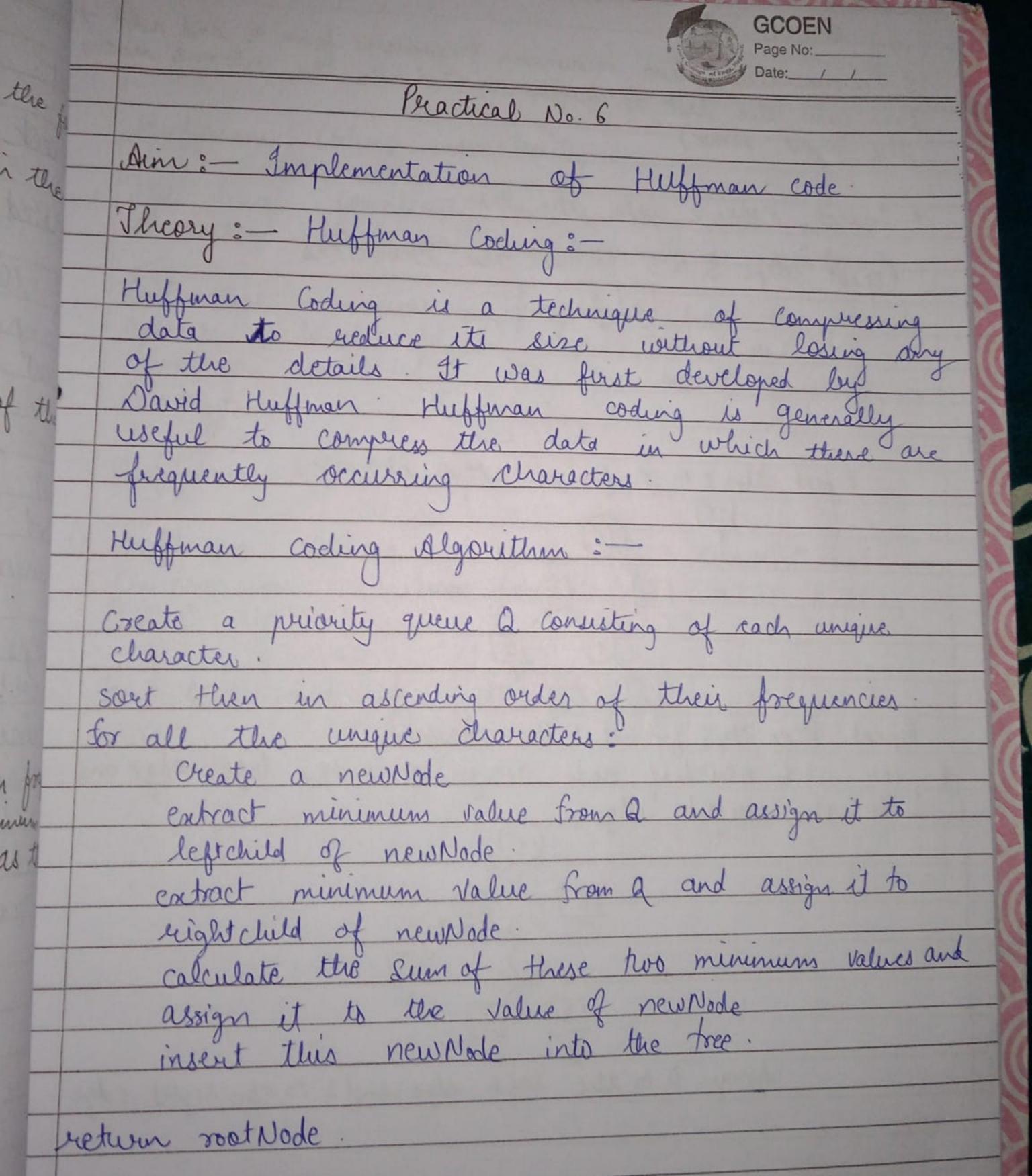
Page No: Practical No. 4 Ain: Finding the cost of minimal spanning Theory: - A minimum spanning tree (MST) or minishum weight spanning tree for a weighted, connected undirected graph is a spanning tree with a weight less than or equal to the weight Of every other spanning tree In Kruskal's algorithm, sort all edges of the given graph in increasing order. Then it keeps if the newly added edge does not form a cycle It picks the minimum weighted edge at firs and the manumen weighted Edge at last Thus we can say that it makes a locally optime charic in each step in order to find the optimal Solution Hence, this is a Greedy Algorithm using Kruskal's Algorithm Steps for finding MST 1. Averange the edge of G in order of increasing weigh 2. Starting only with the vertices of G and proceeding sequentially add each edge which does not result is a cycle, until (n-1) edges are used. Teacher's Signature. **Piyush Enterprises**

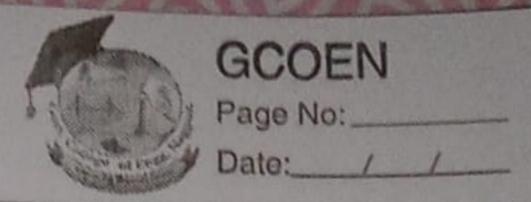






he sport Clreck Whather the adjacent verte Check Whether the adjacent vertices of the last visited vertex are present in the Visited [] array or not the vertices are not in the visited Dorray compare the cost of edges and add the least of cost edge to the output spanning tree. eck univisited verten with the least The adjacent cost edge is added into the Visited [] averay and the least cost edge is added to the minimum spanning tree output. Steps 2 and 4 are superated for all the unvisited vertices in the graph to obtain the full minimum spanning tree output for the given graph. (a) Calculate the rost of the minimum spanning tree obtained.





	Hubbman Coding Complexity:	
-		
	The time Complexity for encoding each unique character based on its prequency is o (n log n).	
-	et in Onlogn.	
	queue taker he ferequency from the priority	
	Complexity is o(logn). Thus the overall complexity is	
	Hubfman Coding Applications:	
1		
1	Conventional	
	Compression Germats like G77JP, B21P2, PKZIP, etc.	
	For text and fax transmissions	