MUH334E18YV3 # **/10**

Name: **SOLUTION**

[9p] Use **Prim's algorithm** starting with the node *, where * is the last digit of your student number, to find the minimum spanning tree for the graph G, whose adjacency matrix representation is given below. Show your work.

G	0	1	2	3	4	5	6	7	8	9
0	0	3	0	4	4	0	0	0	0	0
1	3	0	10	0	2	3	0	0	0	0
2	0	10	0	0	0	6	1	0	0	0
3	4	0	0	0	5	0	0	6	0	0
4	4	2	0	5	0	11	0	2	1	0
5	0	3	6	0	11	0	2	0	3	11
6	0	0	1	0	0	2	0	0	0	8
7	0	0	0	6	2	0	0	0	4	0
8	0	0	0	0	1	3	0	4	0	7
9	0	0	0	0	0	11	8	0	7	0

Edges	Weight	Visited
62	1	8th
84	1	2nd
41	2	3rd
65	2	7th
74	2	4th
10	3	5th
51	3	6th
85	3	x
30	4	9th
40	4	
87	4	
43	5	
52	6	
73	6	
98	7	1st
96	8	
21	10	
54	11	
95	11	

(is taken as 9.)*

[1p] What is the weight of your minimum spanning tree?

7+1+2+2+3+3+2+1+4=**25**