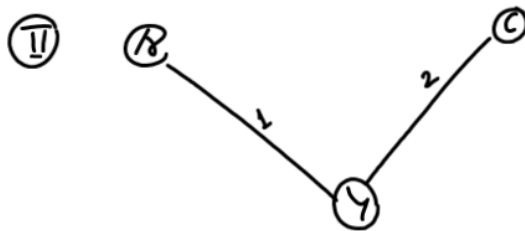
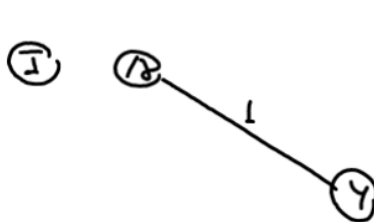
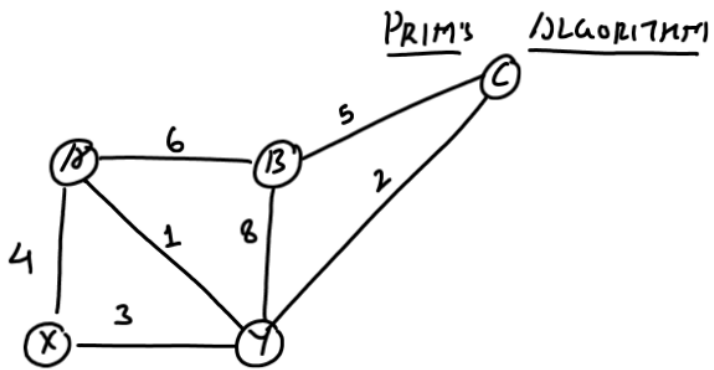
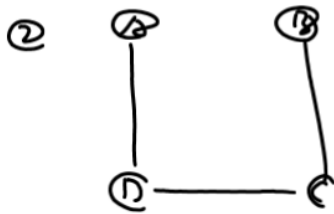
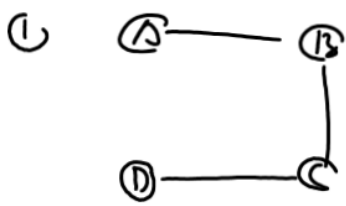
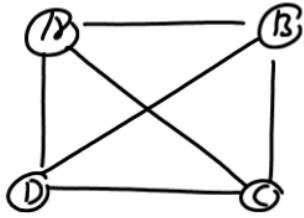
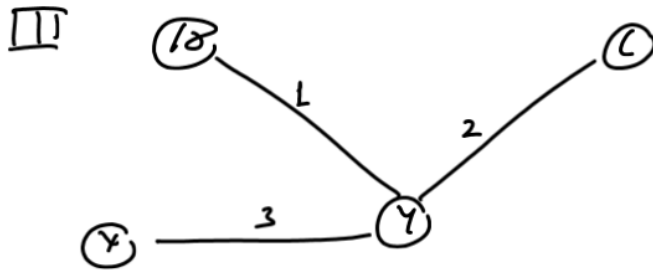
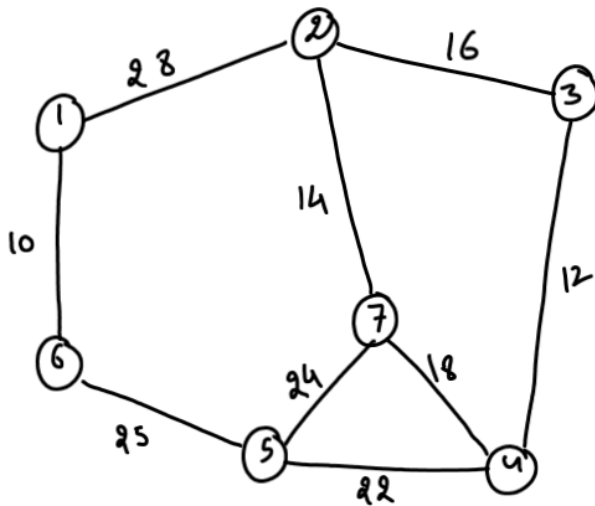
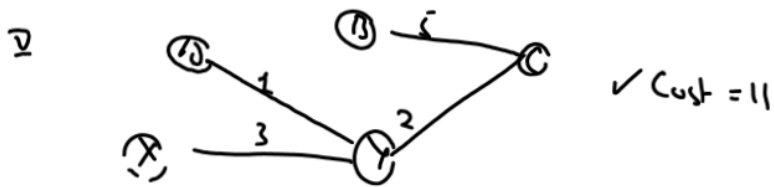


# SPANNING TREE

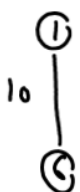




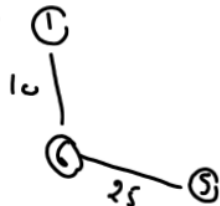
IV Discard u



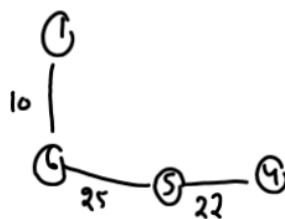
a.



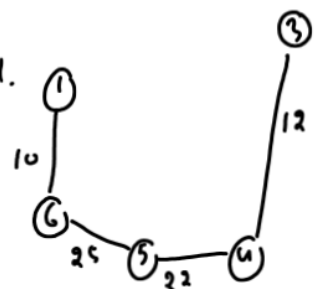
b.

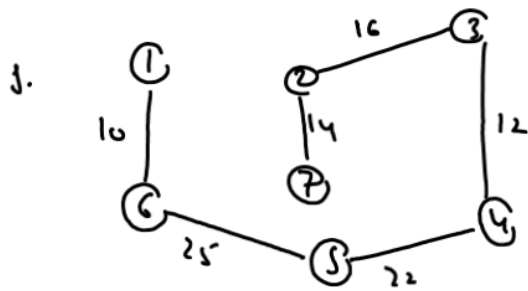
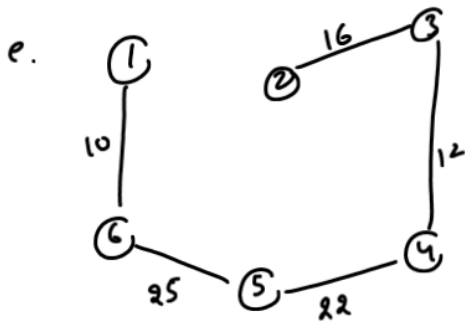


c.

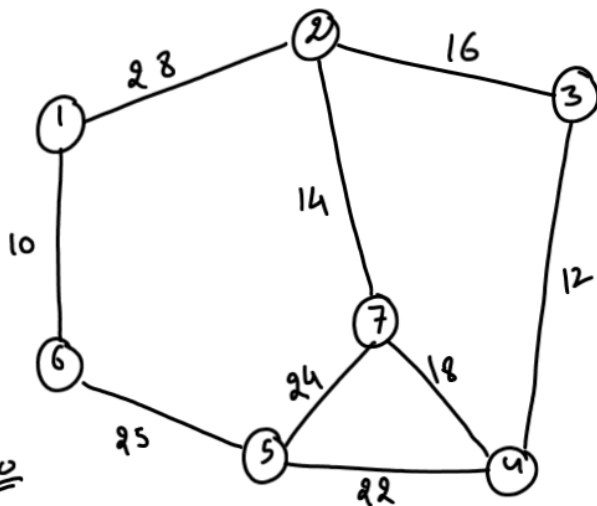


d.





Cost = 77



Step 0

new

	0	1	2	3	4	5	6	7
0	0	1	6	6	6	0	6	

t

	0	1	2	3	4	5
0	1					
1	6					

Cost

	0	1	2	3	4	5	6	7
0								
1	1	28	1	1	1	10	1	
2	28	1	16	1	1	1	14	
3	1	16	1	12	1	1	1	
4	1	1	12	1	22	1	18	
5	1	1	1	22	1	25	24	
6	10	1	1	1	25	1	7	
7	1	14	1	18	24	1	1	

Step 1

2, 1 : 28  
 3, 6 : 1  
 4, 6 : 1  
 5, 6 : 25  
 7, 6 : 1

Min: 5, 6 → 25

update near →

	0	1	2	3	4	5	6	7
=	0	1	6	5	0	0	5	

add matrix →

0	1	6	
1	6	5	

Step 2

2, 1 : 28  
 3, 6 : 1  
 4, 5 : 22  
 7, 5 : 24

Min = 4, 5 → 22

update near →

	0	1	2	3	4	5	6	7
=	0	1	4	0	0	0	4	

add matrix →

1	6	5	
6	5	4	

Step 3

$2, 1: 28$   
 $3, 4: 12$   
 $7, 4: 12$

Min =  $3, 4: \rightarrow 12$

update new

0	1	2	3	4	5	6	7
$\infty$	0	3	0	0	0	0	4

add vertex

1	6	5	4				
6	5	4	3				

Step 4

$2, 3: 16$   
 $7, 4: 18$

Min  $2, 3: \rightarrow 16$

update new

0	1	2	3	4	5	6	7
$\infty$	0	0	0	0	0	0	2

add vertex

0	1	2	3	4	5	6
1	6	5	4	3		
6	5	4	3	2		

Step 5

7, 2: 14 } Min = 7, 2:  $\rightarrow$  14

0	1	2	3	4	5
1	6	5	4	3	2
6	5	4	3	2	7

final spanning tree