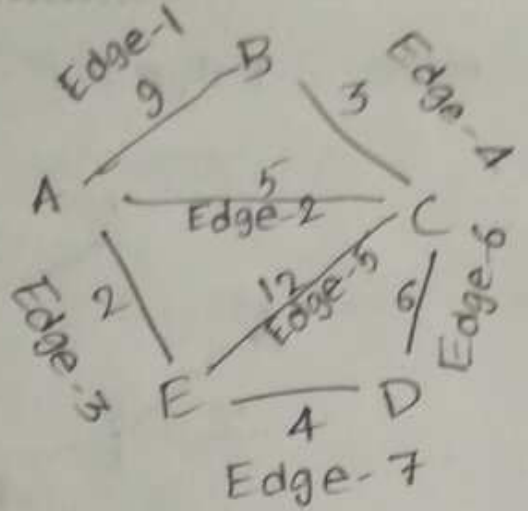
7a)



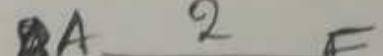
Listing weights of all edges

9, 5, 2, 3, 12, 6, 4

Lets define edge set (ES) = { }.

1. pick smallest edge, edge-3 with weigh 2 & add to ES

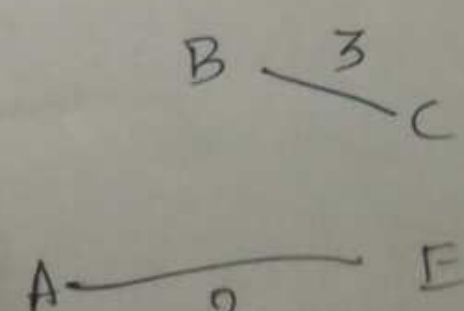
Now ES = { 2 } (Edge-3)



2. pick next smallest edge, edge-4

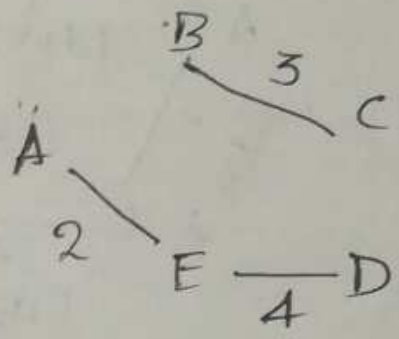
Add it to ES

ES = { 2, 3 } (Edge-3, Edge-4)



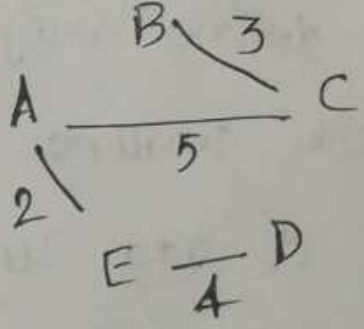
3. pick next smallest edge, Edge-7

ES = { 2, 3, 4 }
Edge-3
Edge-4
Edge-7



4. Pick next smallest edge, Edge-2

ES = { 2, 3, 4, 5 }
Edge-3
Edge-4
Edge-7
Edge-2



Reached edge count = 4 = (N-1)

Hence stop.

Edges in order = { Edge 3, Edge-4, Edge-7, Edge-2 }

= { AE, BC, ED, AC }