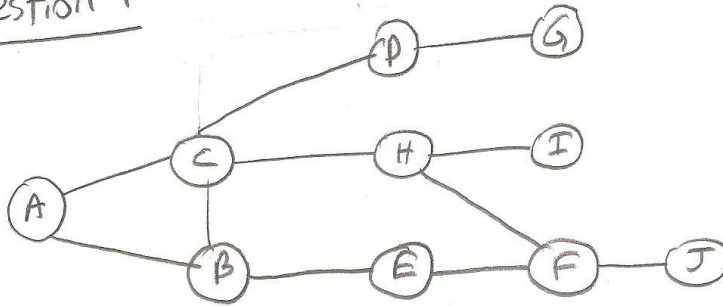


Question 1

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Depth First from 'A':

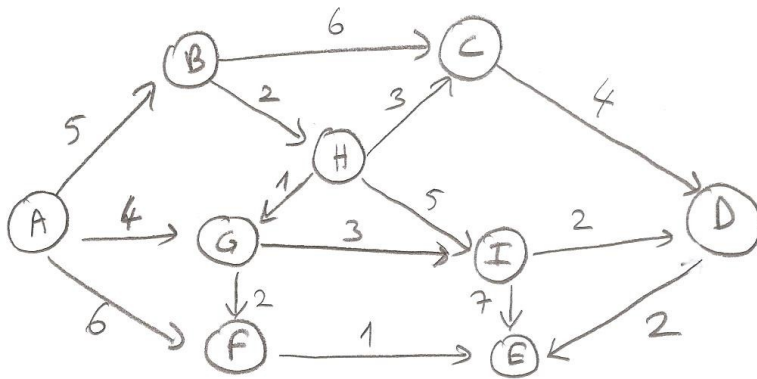
A, B, C, D, G, H, F, E, J, I

Breadth First from 'A':

A, B, C, E, D, H, F, G, I, J

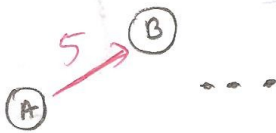
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Question 2a)



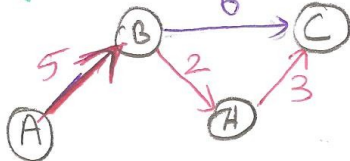
Find the shortest paths from 'A' to all other vertices using Dijkstra's shortest path algorithm.

from A to B:



A, B

from A to C:

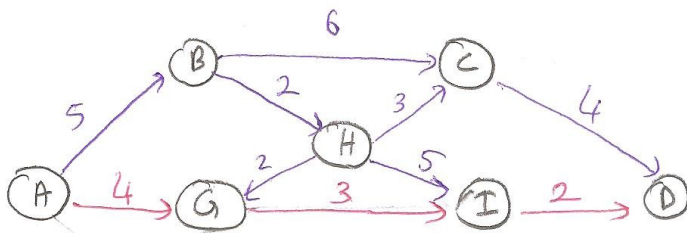


A, B, H, C

Red way is the shortest path.

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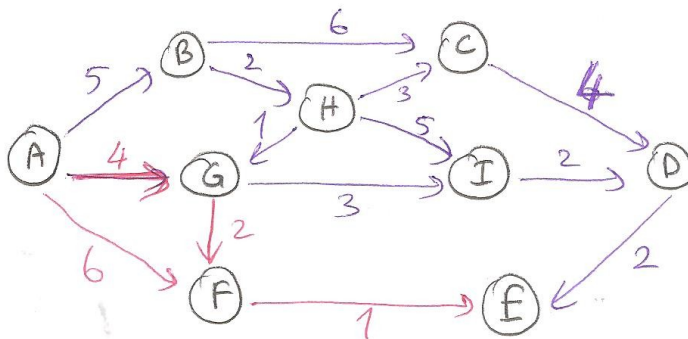
from A to D



Red way is the shortest path.

A, G, I, D

from A to E

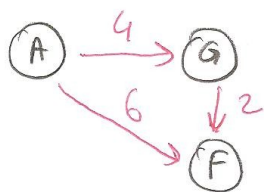


Two red ways are the shortest paths.

A, G, F, E

A, F, E

from A to F

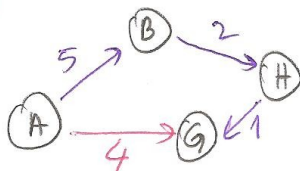


Two red ways are the shortest paths.

A, G, F

A, F

from A to G

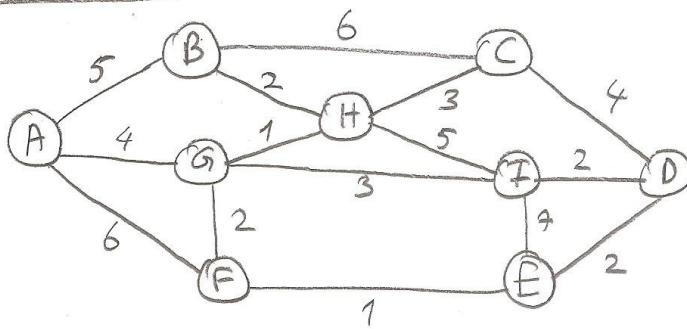


Red way is the shortest path.

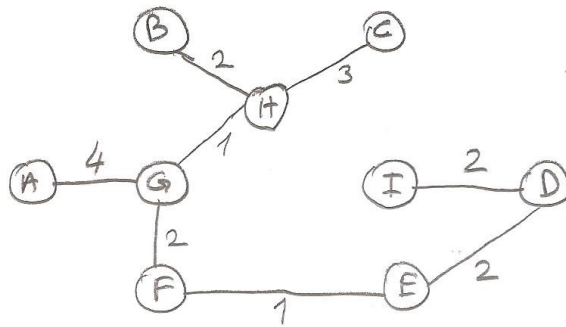
A, G

Question 2 b)

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Find the minimum spanning tree using Prim's algorithm. Start at vertex "I".



The weight of the minimum spanning tree is 17.