2.

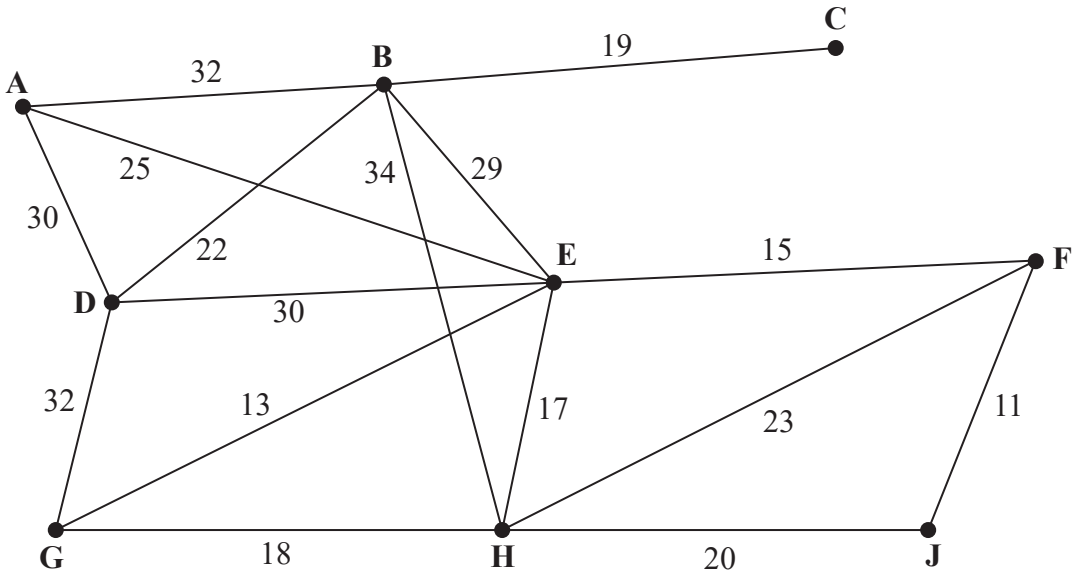


Figure 1

(a) Define the terms

(i) tree,

(ii) minimum spanning tree.

(3)

(b) Use Kruskal's algorithm to find the minimum spanning tree for the network shown in Figure 1. You must clearly show the order in which you consider the edges. For each edge, state whether or not you are including it in the minimum spanning tree.

(3)

(c) Draw the minimum spanning tree using the vertices given in Diagram 1 in the answer book and state the weight of the minimum spanning tree.

(2)

(Total 8 marks)