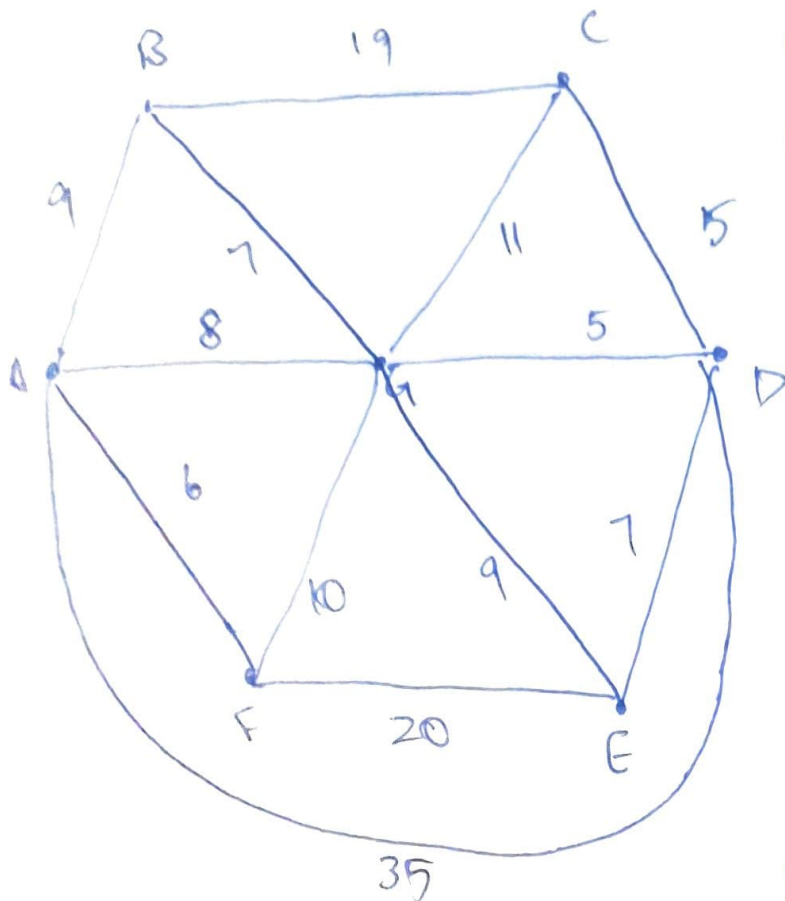


Q. Chinese postman:



vertices of odd degree are:

B, C, F, E

Making pairs:

$$\begin{array}{l} BC^* = 7 + 11 = 18 \\ FE^* = 10 + 9 = 19 \end{array} \quad \left. \vphantom{\begin{array}{l} BC^* \\ FE^* \end{array}} \right\} = 37$$

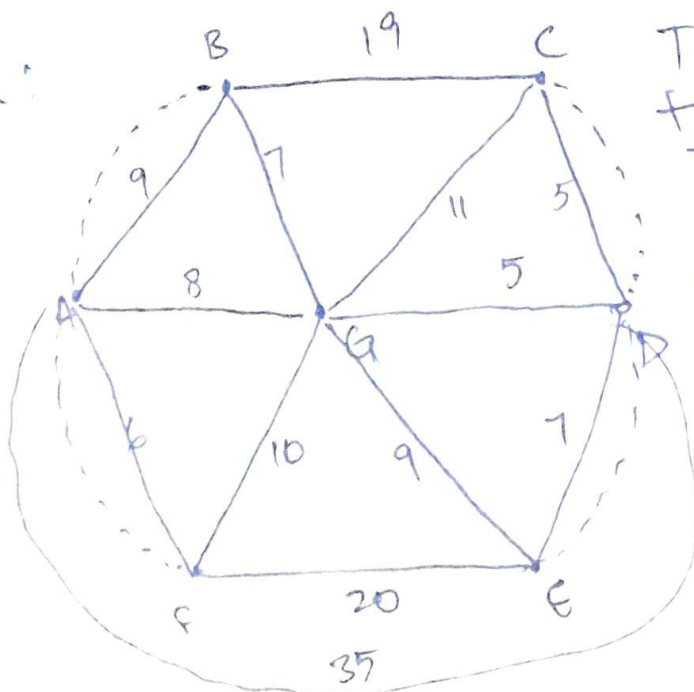
$$\begin{array}{l} BF = 9 + 10 = 19 \\ CE = 5 + 7 = 12 \end{array} \quad \left. \vphantom{\begin{array}{l} BF \\ CE \end{array}} \right\} = 31$$

$$\begin{array}{l} BE : 7 + 9 = 16 \\ CF : 11 + 10 = 21 \end{array} \quad \left. \vphantom{\begin{array}{l} BE \\ CF \end{array}} \right\} = 37$$

We see that BF, CE pair is shortest, we choose that:

BF & CE : (path)

Graph:



$$\begin{aligned} \text{Total cost} &= 19 \\ &+ 7 + 11 + 5 + 5 + 9 + 8 \\ &+ 6 + 10 + 9 + 7 + 20 + 35 \\ &= 151 + 27 \\ &= \underline{\underline{178}} \end{aligned}$$

Possible path:

A — B — C — D — G — C — D — E
— G — B — A — G — F — A
— D — E — F — A .

↳ Total cost = 178