



Answer all the following questions: (Hazen-Williams chart is allowed and any missing data can be assumed)

Question 1 (30 marks)

- a) What is the procedure in the design of water distribution system?.....[5]
 b) Given the network shown in Fig. 1, the inflow at A, and outflows at C, D and E. Using Hardy Cross method, find the flows in the individual pipes comprising the network (only one trial is required).....[25]

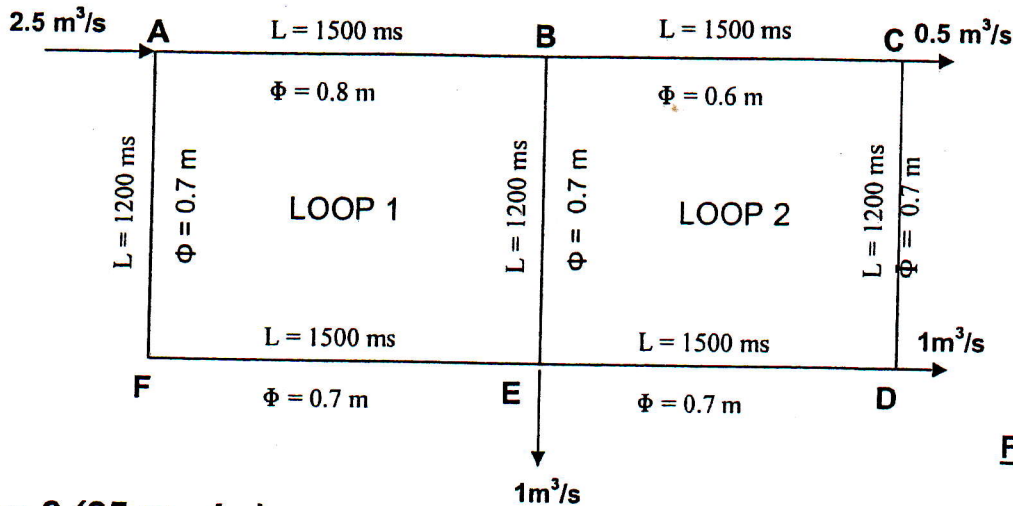


Fig. 1

Question 2 (25 marks)

- a) What is the meaning of equivalent pipe?.....[5]
 b) In the shown network Fig. 2 of a distribution system ABCDE, it is required to determine the diameter of the new pipeline DE established between points D and E, giving the following data :
 Discharge $Q = 210 \text{ lit/sec}$.
 Pressure at A = 50 meter head.
 Pressure at E = 20 meter head.....[20]

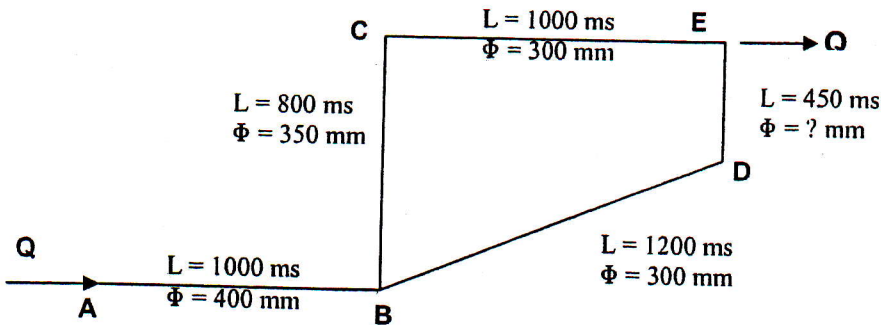


Fig. 2

See next page.....



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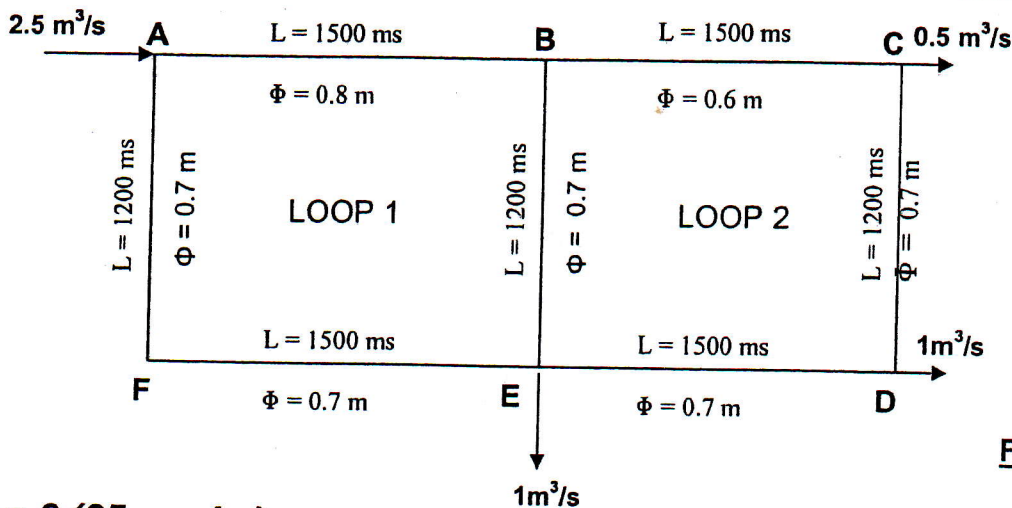


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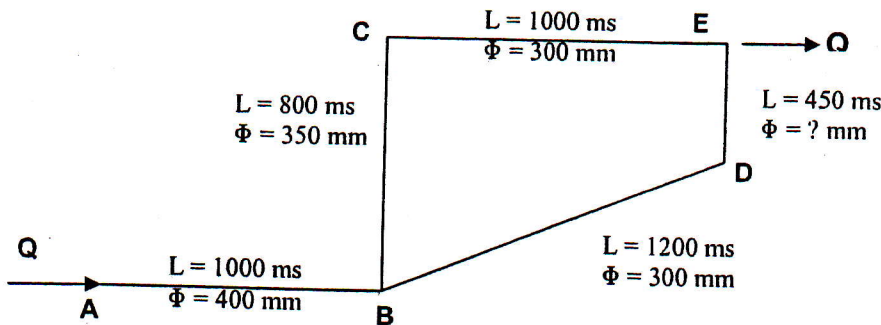


Fig. 2

See next page.....

S (cm/100m)

