

Higher technological institute
10th of Ramadan city
6th of October branch
Civil Engineering department

Subject: water and waste water system

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Sheet (5)
Sewerage system

- 1 – Define the sewerage system and draw the collection works and sewer lines
- 2 – What are the types of pipes materials in the sewerage system and what are the sources of waste water
- 3 – What is the Classification of the sewerage system(with drawing)
- 4 – What is the purpose of manholes and explain with drawing the location of manholes
- 5 – Draw a section elevation of manhole
- 6 – For a city of population 100,000 capita , average water consumption 100 L/c/d , the infiltration is 15% from the average flow m it is required to design its collector sewer line if it run 3/4 full at peak flow and $(n)=0.013$
- 7 – For the shown sewer network fig.(1), It is required (Choose the main line – Location of manhole – Numbering all lines and manholes)
- 8 – Determine the invert level For each manhole in fig. (2)

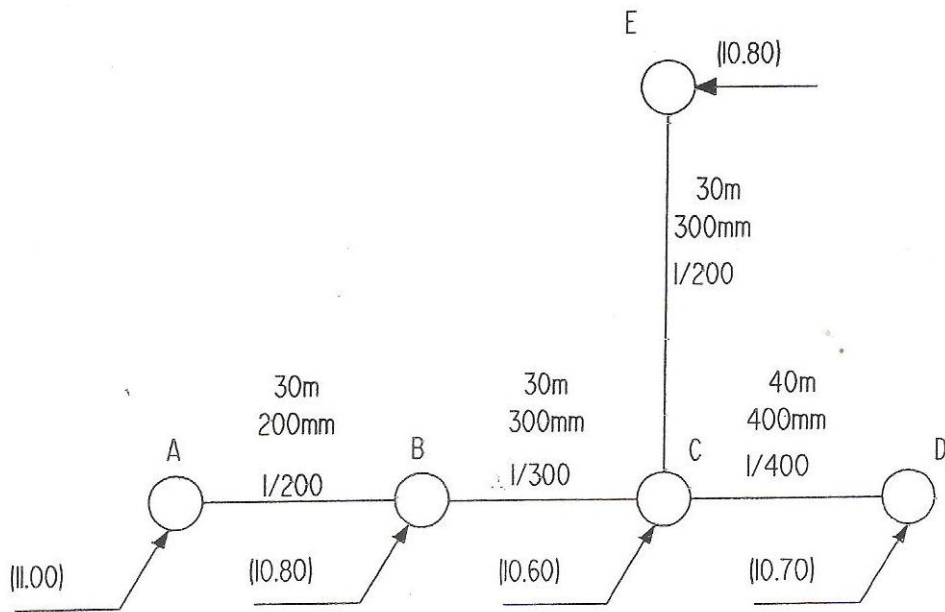


FIG (2)