

ENVIRONMENTAL ENGINEERING

Water Supply Engineering: Distribution Network

BY

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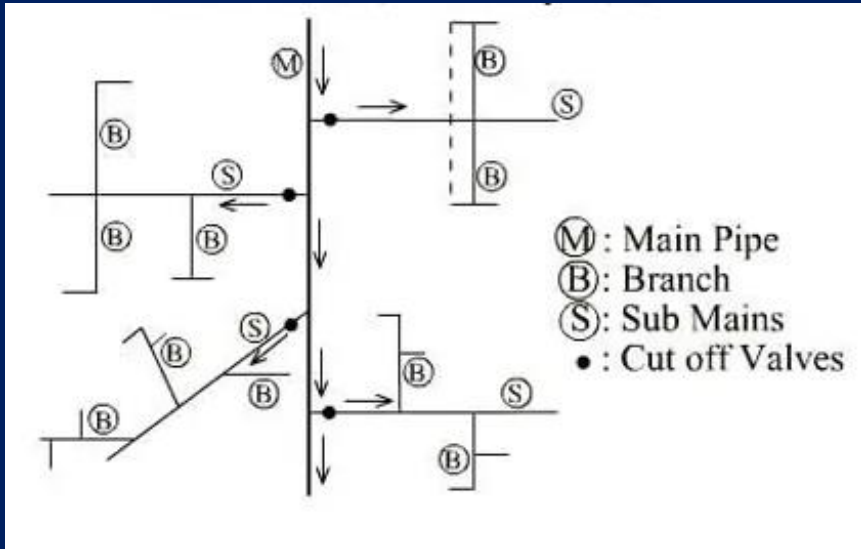
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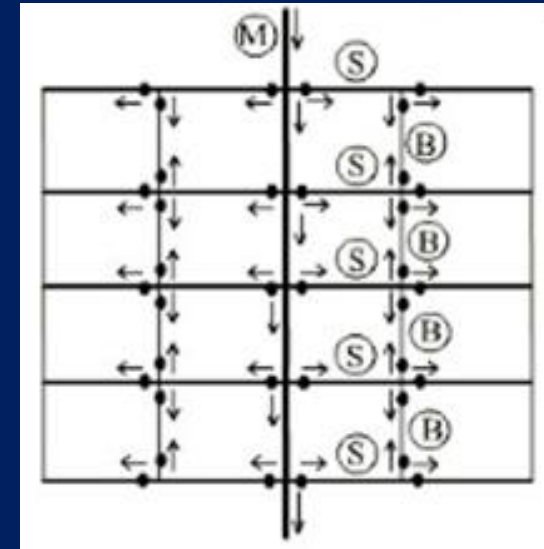
Water Distribution Network

- The process of carrying treated water from treatment plant to individual houses is known as the distribution system.

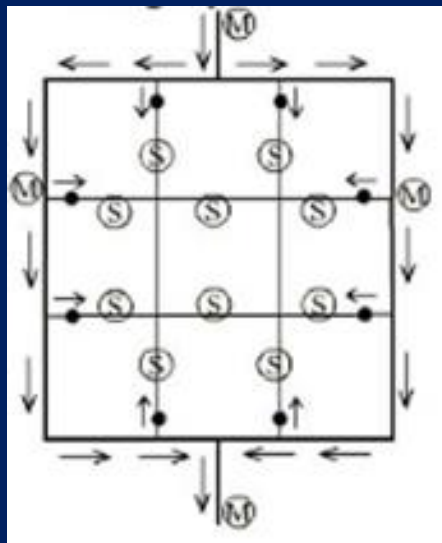
The four types of layouts are listed as:



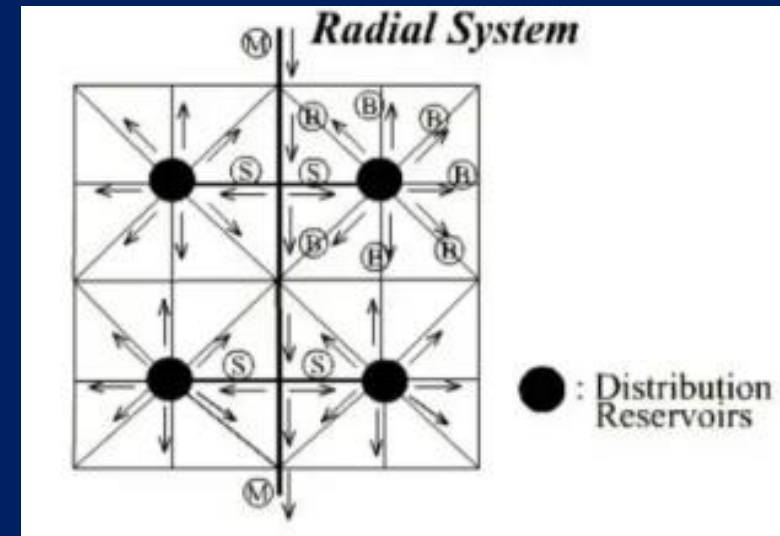
Dead End or Tree System



Grid Iron or Interlaced or Reticulation System



Ring or Circular System



Radial System

System	Advantages	Disadvantages
Dead End System	• Simple design • Low initial cost • Easy to lay	• Water stagnation • Unequal pressure • Poor for fire demand
Ring System	• Uniform pressure • No dead ends • Better fire supply	• Higher cost • More pipe length
Radial System	• Good pressure control • Easy zoning • Efficient operation	• Skilled planning needed • Higher initial cost
Grid Iron System	• Continuous circulation • Uniform pressure • High reliability	• Expensive • Complex design

PYQ's

1. What is the major function of a water distribution system? (SSC JE 2024)

- (a) To carry water from the treatment plant to individual homes
- (b) To carry water from the source to the filtration unit
- (c) To carry water from individual homes to the treatment plant
- (d) To carry water from the source to the pump house

PYQ's

2.The most reliable system of distribution of water is (TNPSC AE 2024)

- (a) Combined pumping and storage system
- (b) Gravity system
- (c) Pumping system
- (d) Pumping without storage system
- (e) Answer not known

PYQ's

3.The type of layout of water supply distribution system that has only one main from which sub-mains and laterals branch off, also most suitable for an irregularly grown city is

- (a) dead-end system
- (b) grid iron system
- (c) ring system
- (d) radial system

4. The most suitable type of Distribution system in which main pipe lines are provided around the area i.e., peripherally for a town or area having well planned streets and roads is?

- | | |
|-------------------------|---------------------|
| (a) Reticulation System | (b) Dead End System |
| (c) Grid-Iron System | (d) Circular System |

5.The water supply distribution system used in a city of roads of rectangular pattern is :

- (a) Radial system
- (b) Ring system
- (c) Dead end system
- (d) Grid iron system



Thank you

