

## Section 5

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Q) Write short note on questions.

(i) Well losses:-

When the water is pumped out of a well the total drawdown caused includes not only that of the logarithmic drawdown curve at the well face, but also drawdown caused by flow through well screen and partial movement within the well. The latter drawdown is called well losses.

(ii) Rain water harvesting:-

Rain water harvesting is the method used for collecting, storing and using rainwater for various purposes, for ex: - Landscape irrigation.

This technique is used to collect rainwater from different hard surface like rooftops and another manmade hard surface above the ground.

Using rainwater for laundry, garden use and for flushing the toilet can reduce 70% of the consumption of main water by a household.

## (iv) Aquifer and Aquiclude.

### Aquifer

An aquifer is an underground layer of water bearing permeable rock, rock fractures or unconsolidated material. Ground water can be ~~not~~ extended using a water well. The study of water flow in aquifer and the characteristics of aquifer is called hydrogeology.

### Aquiclude

Aquiclude is a geological formation which is essentially impermeable to the flow of water. It may be considered as closed to water movement even though it may contain large amount of water due to its high porosity.

(v) Radius of Influence and Cone of depression.

⇒ Radius of Influence

The Radial distance from centre of a well bore to the point where there is no lowering of the water table or potentiometric surface because of pumping of the well, ~~the edge of~~

⇒ Cone of depression

A cone of depression occurs in an aquifer when groundwater is pumped from a well. In an unconfined aquifer, this is an actual depression of water levels. In confined aquifers the cone depression is a reducing in the pressure head surrounding the pumped well.