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WATER: A PRECIOUS RESOURCE

Chapter: - 16



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CLASS: - 7TH
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Chapter:16

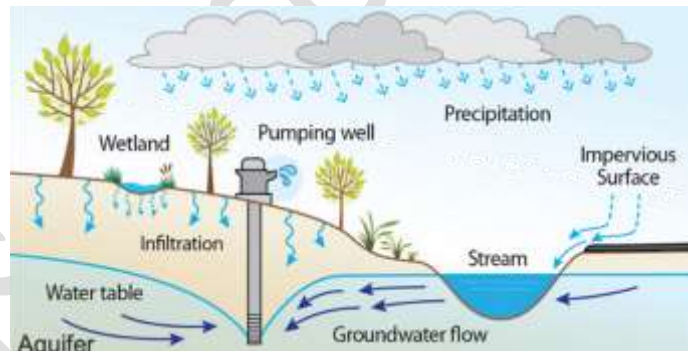
Water: A precious Resource

Q1: Mark 'T' if the statement is true and 'F' if it is false:

- (a) The freshwater stored in the ground is much more than that present in the rivers and lakes of the world. **(T)**
- (b) Water shortage is a problem faced only by people living in rural areas. **(F)**
- (c) Water from rivers is the only source for irrigation in the fields. **(F)**
- (d) Rain is the ultimate source of water. **(T)**

Q2: Explain how groundwater is recharged?

Ans: Groundwater is recharged through various natural processes. When rainwater falls, a portion of it infiltrates into the soil and percolates downwards, replenishing the groundwater reservoirs. Additionally, melting snow and ice contribute to groundwater recharge. Surface water bodies such as rivers and lakes can also recharge groundwater through seepage. Lastly, in certain regions, artificial methods like recharge wells or injection of treated wastewater can be employed to replenish groundwater levels.

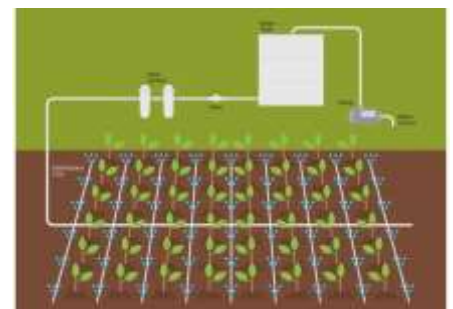


Q3: There are ten tube wells in a lane of fifty houses. What could be the long-term impact on the water table?

Ans: The long-term impact on the water table in this scenario would depend on various factors such as the depth and productivity of the tube wells, it is possible that the excessive extraction of groundwater through ten tube wells in a relatively small area could lead to a decline in the water table over time. This can result in the depletion of groundwater resources, reduced availability of water for both domestic and agricultural.

Q4: You have been asked to maintain a garden. How will you minimise the use of water?

Ans: To maintain a garden in the minimum use of water we can use water-efficient irrigation like drip system water deliver directly to the roots of plants, minimizing evaporation and water waste.



Q5: Explain the factors responsible for the depletion of water table.

Ans: Several factors contribute to the depletion of the water table are: -

- (a) Overextraction:** Excessive pumping of groundwater for various purposes, such as agriculture, industry, and domestic use, can lead to the depletion of the water table.
- (b) Population growth and increased water demand:** Rapid population growth in urban areas or regions with limited water resources puts additional pressure on groundwater sources. Increased water demand for various purposes, including drinking water, irrigation, and industrial needs.

Q6: Fill in the blanks with the appropriate answers:

- (i)** People obtain groundwater through **Tube wells** and **hand pumps**.
- (ii)** Three forms of water are **ice**, **water** and **vapour**.
- (iii)** The water bearing layer of the earth is **Aquifer**.
- (iv)** The process of water seepage into the ground is called **infiltration**.

Q7: Which one of the following is not responsible for water shortage?

- (i)** Rapid growth of industries
- (ii)** Increasing population
- (iii)** Heavy rainfall
- (iv)** Mismanagement of water resources

Ans: (iii) Heavy rainfall

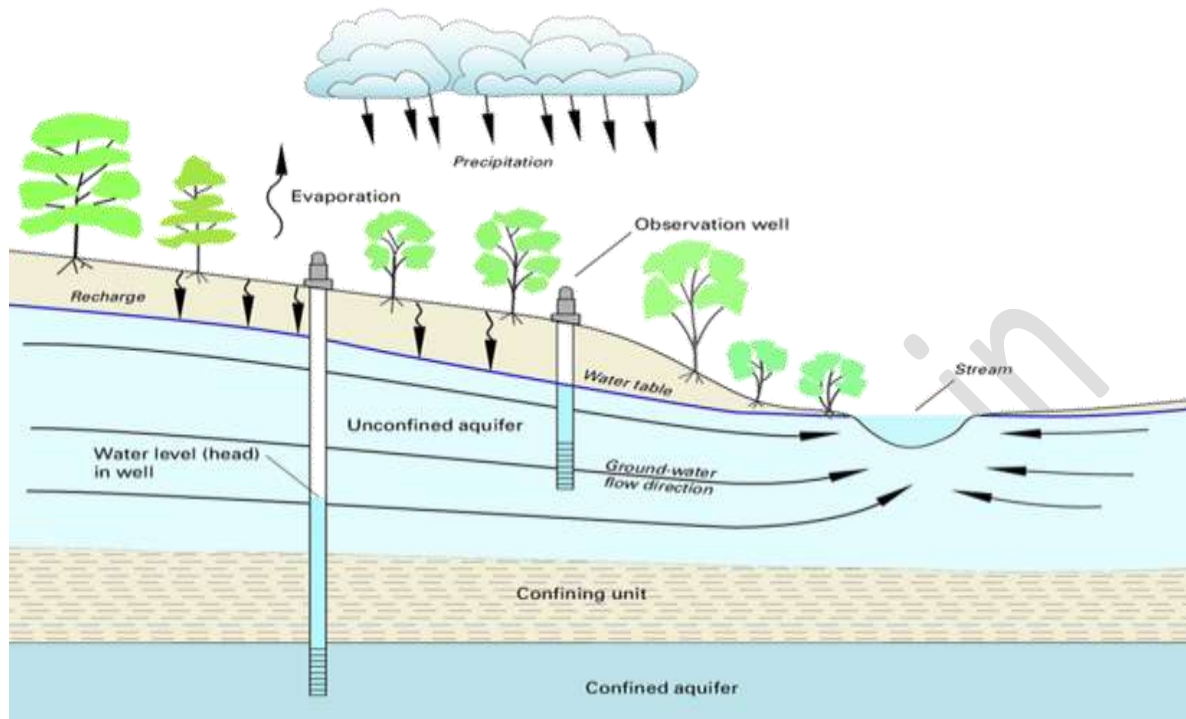
Q8: Choose the correct option. The total water

- (i)** in the lakes and rivers of the world remains constant.
- (ii)** under the ground remains constant.
- (iii)** in the seas and oceans of the world remains constant.
- (iv)** of the world remains constant.

Ans: (iv) of the world remains constant.

Q9: Make a sketch showing groundwater and water table. Label it.

Ans:



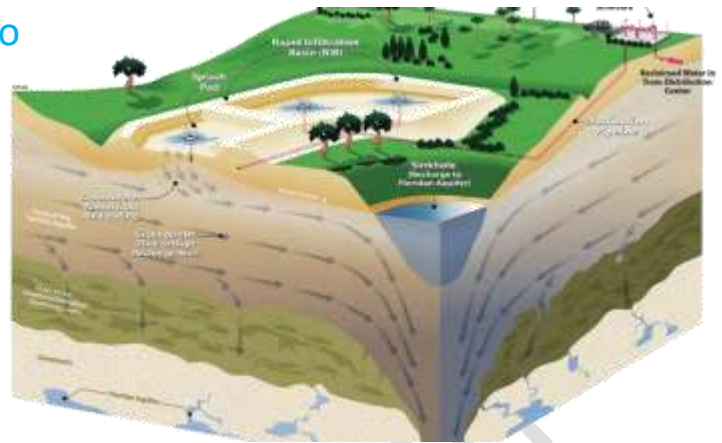
Key Words

Aquifer: An aquifer is an underground layer of permeable rock, soil, or sediment that contains and transmits groundwater. It acts as a natural storage and supply system for groundwater.

Depletion: Depletion refers to the reduction or decrease in the quantity or quality of a resource over time. In the context of water, it specifically refers to the reduction of groundwater levels or the overall water availability in a particular area.

Drip irrigation: Drip irrigation is an irrigation method that delivers water directly to the plant roots, minimizing evaporation and water loss. It involves the use of a network of tubes or pipes with small emitters that slowly release water near the base of plants.

Groundwater: Groundwater refers to the water that is stored beneath the Earth's surface in underground aquifers. It fills the spaces between soil particles or permeable rock formations and is a vital source of drinking water and irrigation for many regions.



Infiltration: Infiltration is the process by which water penetrates the soil surface and enters into the underlying layers or aquifers. It is a key component of groundwater recharge and occurs when the soil is porous enough to allow water to pass through.

Recharge: Recharge refers to the process of replenishing groundwater supplies. It occurs when water from precipitation, snowmelt, or surface water bodies infiltrates the soil and percolates down to recharge the underground aquifers.

Water harvesting: Water harvesting is the collection and storage of rainwater or runoff for future use. It involves various techniques such as rooftop rainwater harvesting, building reservoirs or tanks, or using underground storage systems to capture and store water.

Water table: The water table is the level below the ground surface at which the soil and rock are saturated with water. It represents the upper boundary of the saturated zone in an aquifer and can vary in depth depending on factors such as rainfall, groundwater extraction, and geological conditions

