

Class 10 Geography Chapter 3 (Water Resource)

1. What is water scarcity? What are its main causes?

Answer: Water scarcity refers to the situation where the demand for water exceeds its availability. The main causes include over-exploitation, excessive use in agriculture, pollution, and uneven distribution of water resources.

2. Define watershed management.

Answer: Watershed management involves the conservation, regeneration, and judicious use of all the resources—like land, water, plants, and animals—within a watershed to improve the quality of life for the people residing there.

3. What are the main objectives of rainwater harvesting?

Answer: The main objectives include recharging groundwater, reducing soil erosion, minimizing flood hazards, and ensuring the availability of water for various uses during dry periods.

4. Explain the term 'multipurpose river valley project' with an example.

Answer: A multipurpose river valley project is designed to serve multiple functions such as irrigation, hydroelectric power generation, flood control, and water supply. Example: The Bhakra Nangal Dam project.

5. How does deforestation affect the water cycle?

Answer: Deforestation leads to a decrease in transpiration and evaporation, disrupting the water cycle. It also reduces rainfall and increases the risk of floods and droughts.

6. What is the significance of the Tehri Dam in India?

Answer: The Tehri Dam is significant for its role in providing irrigation, drinking water supply, and hydroelectric power to several regions in India, especially in Uttarakhand.

7. Name two traditional methods of rainwater harvesting in India.

Answer: Two traditional methods are **Khadins** in Rajasthan and **Kundis** in Gujarat.

8. What is groundwater depletion, and what are its consequences?

Answer: Groundwater depletion occurs when water is extracted from aquifers faster than it is replenished. Consequences include lowering of the water table, reduced water supply, land subsidence, and increased salinity.

9. Why is it important to conserve water?

Answer: Conserving water is crucial to ensure its availability for future generations, prevent water scarcity, and sustain life on Earth.

10. What are the advantages of dams?

Answer: Dams provide water for irrigation, generate hydroelectric power, control floods, and supply water for domestic and industrial use.

11. What is drip irrigation, and how does it help in water conservation?

Answer: Drip irrigation is a method of watering plants directly at the roots with minimal water loss. It helps in conserving water by reducing evaporation and runoff.

12. Explain the term 'water harvesting' and its importance.

Answer: Water harvesting is the process of collecting and storing rainwater for future use. It is important for recharging groundwater, ensuring water supply during dry periods, and reducing water runoff.

13. What are the drawbacks of the construction of dams?

Answer: Drawbacks include displacement of people, environmental degradation, loss of biodiversity, submergence of large areas, and the risk of dam failures.

14. What are the different types of irrigation systems in India?

Answer: Different types include canal irrigation, tank irrigation, well and tube well irrigation, and drip irrigation.

15. Explain the concept of integrated water resource management (IWRM).

Answer: IWRM is a process that promotes the coordinated development and management of water, land, and related resources to maximize economic and social welfare without compromising the sustainability of vital ecosystems.

16. What is the significance of the Narmada Bachao Andolan?

Answer: The Narmada Bachao Andolan was a movement aimed at protesting the construction of large dams on the Narmada River, focusing on the environmental and human impacts, particularly the displacement of local communities.

17. Describe the impact of water pollution on aquatic life.

Answer: Water pollution depletes oxygen levels, introduces toxic substances, and disrupts aquatic ecosystems, leading to the death of aquatic species and the loss of biodiversity.

18. What is the role of the Central Water Commission in India?

Answer: The Central Water Commission is responsible for initiating, coordinating, and furthering water resources development at the national level for irrigation, flood control, and hydroelectric power generation.

19. How does climate change affect water resources?

Answer: Climate change leads to altered precipitation patterns, increased evaporation, more frequent and severe droughts and floods, and reduced snowpack, all of which affect the availability and distribution of water resources.

20. What measures can be taken to address water scarcity?

Answer: Measures include promoting water conservation, rainwater harvesting, efficient irrigation techniques, reusing and recycling water, protecting water bodies, and managing groundwater sustainably.