Water Resources (Important Assignment for Class 10th)

Assignment Questions:

Q.1 Why do some regions suffer from water scarcity despite the Earthâ??s abundance of water?

Q.2 How can integrated water resources management help in addressing water scarcity?

Q.3 What are the major factors contributing to water scarcity in urban areas?

Q.4 Why do we need to conserve water? *(Recently asked question in first term exam)* (3)

Q.5 How did dams affect the natural flow of rivers and aquatic life? (2)

Q.6 Why did the construction of multi-purpose projects lead to social movements like the â??Narmada Bachao Andolanâ??? (2)

Q.7 How might the government address the concerns of local communities affected by these projects while still pursuing national development goals? (3)

Q.8 How have multi-purpose projects contributed to inter-state water disputes, and can you provide examples? (2)

Q.9 Explain the traditional methods of water harvesting in Rajasthan?(3)

Q.10 Can you name some of the major objections raised against multi-purpose projects and large dams in recent years? (2)

Q.11 Which organization led the â??Narmada Bachao Andolan,â?? and what were its primary concerns regarding the Sardar Sarovar Dam project? (2)

Q.12 How does the traditional rooftop rainwater harvesting system work in arid regions like Rajasthan, and why is it considered a reliable source of drinking water? (2)

Q.13 â?• Mawsynram is the region of highest rainfall, yet it faces acute water shortage.â?• State reasons for the same. *(Recently asked question in first term exam)* (3)

Q.14 Evaluate the effectiveness of the bamboo drip irrigation system in Meghalaya in terms of water conservation and agricultural productivity. (2)

Q.15 What are the reasons for the decline in rooftop rainwater harvesting in western Rajasthan? (2)

Q.16 What is the significance of rainwater harvesting in Shillong, Meghalaya, despite being located in an area with the highest rainfall in the world? (2)

Q.17 Which Indian state made rooftop rainwater harvesting structures compulsory for all houses, and what are the consequences for non-compliance?

Answers:

Answer 1: Water scarcity can occur due to over-exploitation, excessive use, and unequal access to water resources among different social groups. Even regions with ample water may face scarcity if they cannot access or manage it effectively.

Answer 2: Integrated water resources management involves the coordinated development and management of water, land, and related resources. It helps optimize the use of available water, prevent over-exploitation, and ensure sustainable access to water for various purposes.

Answer 3: Urbanization, industrialization, and population growth have led to increased water demands in cities. Groundwater depletion, pollution from industrial and domestic sources, and mismanagement of water resources exacerbate water scarcity issues in urban areas.

Answer 4: We can conserve water in following ways:-

1. **Limited Resource:** Water is finite, and its availability is decreasing due to various factors.
2. **Growing Demand:** Rising global population and industrialization increase the need for water resources.
3. **Environmental Impact:** Water conservation is essential to protect ecosystems, reduce energy consumption, and mitigate the effects of climate change for a sustainable future.

Answer 5: Dams change river flow, harming aquatic life. They block natural flow, causing sediment buildup and habitat loss. Fish canâ??t migrate, leading to issues.

Answer 6: Multi-purpose projects led to protests like â??Narmada Bachao Andolanâ?? due to:-

1. **Displacement**: Large-scale displacement of local communities who lost land and livelihood.
2. **Unsatisfactory Rehabilitation**: Concerns over inadequate compensation and rehabilitation for affected people.

Answer 7: The government can address the concerns of local communities affected by these projects while still pursuing national development goals through the following strategies:

1. **Fair Compensation and Rehabilitation**:
    - Ensure fair compensation for land and livelihood loss.
    - Implement comprehensive rehabilitation programs, providing alternative housing and livelihood opportunities.
2. **Community Participation**:
    - Involve affected communities in decision-making and project planning.
    - Establish grievance redressal mechanisms for addressing concerns promptly.
3. **Sustainable Development**:
    - Promote sustainable development practices, balancing economic growth with environmental and social well-being.

- Focus on equitable resource distribution to benefit local communities and regions affected by the projects.

Answer 8: Multi-purpose projects can lead to water disputes among states. For example, there is a dispute between Karnataka and Andhra Pradesh over the diversion of water from the Koyna river. This is because such projects often involve the allocation of water resources for various purposes, causing conflicts between states over the sharing of these resources.

Answer 9: Traditional water harvesting in Rajasthan involves several methods, including:

1. **Rooftop Rainwater Harvesting (1 mark)**:
   - Rainwater from sloping rooftops is collected through gutters and downspouts.
   - It is conveyed through pipes to underground tanks or tankas.
2. **Underground Tankas (1 mark)**:
   - Tankas are large, underground storage structures, often as large as a room.
   - They store rainwater for drinking and household use.
3. **Reuse for Cooling (1 mark)**:
   - Tankas also serve to keep indoor spaces cool during hot weather.
   - The evaporative cooling effect helps maintain comfortable temperatures.

These traditional methods ensure a sustainable and reliable water supply in Rajasthanâ??s arid conditions.

Answer 10: Major objections against multi-purpose projects and large dams in recent years include environmental harm and social conflicts. Critics argue these projects disrupt ecosystems, displace communities, and trigger disputes over water resources.

Answer 11: The â??Narmada Bachao Andolanâ?? was led by various non-governmental organizations (NGOs) and activists, notably Medha Patkar. Their primary concerns regarding the Sardar Sarovar Dam project were inadequate rehabilitation of displaced people, environmental impacts, and the need for fair compensation for those affected by the project.

Answer 12: The â??Narmada Bachao Andolanâ?? was led by various non-governmental organizations (NGOs) and activists, notably Medha Patkar. Their primary concerns regarding the Sardar Sarovar Dam project were inadequate rehabilitation of displaced people, environmental impacts, and the need for fair compensation for those affected by the project.

Answer 13: Despite being known for the highest rainfall, Mawsynram faces water scarcity due to:

1. Rapid Runoff: The hilly terrain causes rainwater to run off quickly, preventing effective storage.
2. Lack of Infrastructure: Insufficient facilities for rainwater collection and storage.
3. Uneven Distribution: Rainfall may not match population centers, leading to localized shortages.

Answer 14: The bamboo drip irrigation system in Meghalaya is highly effective for water conservation and agricultural productivity:

1. **Water Conservation**:

    - The system efficiently transports water over long distances with minimal loss, conserving this precious resource.
2. **Agricultural Productivity**:
    - It delivers water directly to plant roots, ensuring efficient irrigation.
    - This enhances crop yields and promotes sustainable farming practices.

Overall, the bamboo drip irrigation system is a successful example of conserving water while boosting agricultural productivity.

Answer 15: The decline in rooftop rainwater harvesting in western Rajasthan is due to:

1. **Availability of Rajasthan Canal:**
    - The perennial Rajasthan Canal provides an alternative water source, reducing the necessity for rainwater harvesting.
2. **Changing Preferences**:
    - Some households no longer practice it due to taste preferences or the convenience of tap water.

Answer 16: Rainwater harvesting in Shillong, despite high rainfall, is significant because:

1. **Uneven Distribution**:
    - The highest rainfall occurs in nearby areas like Mawsynram, not always matching Shillongâ??s needs.
2. **Water Shortages**:
    - Inadequate infrastructure and rapid runoff lead to localized water shortages in Shillong, making rainwater harvesting crucial for a stable water supply.

Answer 17: The Indian state that made rooftop rainwater harvesting structures compulsory for all houses is Tamil Nadu. Consequences for non-compliance include fines and penalties imposed on those who do not adhere to this mandate.

Category

1. Assignments for class 10th

Date
2025/11/13