



Chapter-3 | Water Resources

Worksheet-1

Multiple Choice Questions

1. **The word matkas refers to:**
(a) collecting and storing water
(b) cooking food and eating
(c) serving food and donating
(d) washing clothes and cleaning
2. **Today, in western Rajasthan, sadly the practice of rooftop rainwater harvesting is on the decline as plenty of water is available due.**
(a) to the perennial Rajasthan Canal
(b) rivers
(c) to the tap connections
(d) dams construction
3. **The housing societies or colonies in the cities have their own**
(a) streams of rainwater
(b) groundwater pumping devices to meet their water needs
(c) under ground water sources
(d) rivers connection
4. **The Bhakra - Nangal project water is being used both for:**
(a) hydel power production and irrigation
(b) agriculture and industries
(c) transport and recreation
(d) domestic and industrial
5. **By which year nearly two billion people will live in absolute water scarcity?**
(a) 2020
(b) 2025
(c) 2040
(d) 2030
6. **Rooftop rainwater harvesting was commonly practised to store drinking water, particularly in the state of:**
(a) Rajasthan
(b) Karnataka
(c) Haryana
(d) Kerala
7. **Is it possible that an area or region may have ample water resources but is still facing water scarcity? This possibly can be due to:**
(a) low population
(b) heavy temperature
(c) growing population
(d) scanty rainfall
8. **It is a 200-year-old system of tapping stream and spring water by using bamboo pipes in Meghalaya.**
(a) bamboo drip irrigation system
(b) under ground water storage system
(c) roof top rain water harvesting
(d) rain water harvesting system

9. **The moment we speak of water shortages, we immediately associate it with regions having:**
- (a) low temperature or those that are abundance water
 - (b) heavy temperature and heavy rainfall
 - (c) low rainfall or those that are drought-prone
 - (d) high rainfall or those that are drought-prone
10. **In which of the following States Tungabhadra Dam is located?**
- (a) Tamil Nadu
 - (b) Karnataka
 - (c) Kerala
 - (d) Andhra Pradesh

Fill in the blanks :

11. _____ of the earth's surface is covered with water.
12. Irrigation has also changed the cropping pattern of many regions with farmers shifting to water _____.

True / False

13. Multipurpose river valley projects were initially thought of as temples of modern India.
14. Rainwater harvesting is useful only in areas with heavy rainfall.

Very Short Type Questions

15. Name the place where Salal Dam is located.
16. Analyse the importance of rainwater harvesting.

Short Type Questions

17. Multi-purpose projects are Temples of Modern India'. Justify.
18. It is said that multipurpose projects serve a number of purposes but simultaneously lead to lot of problems too. Is [3] it true?

Essay Type Questions

19. Describe how modern adaptations of traditional rainwater harvesting methods are being carried out to conserve and store water.
20. What is water scarcity and what are its main causes?

HOTS

21. "Is it essential to conserve and manage our water resources" Support the statement with suitable examples.



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Answer & Solution

1. (a) Earthen pots or Matkas used for collecting water in Rajasthan. It is used for collecting and storing water.
2. (a) Today, in western Rajasthan, sadly the practice of rooftop rainwater harvesting is on the decline as plenty of water is available due to the perennial Rajasthan Canal, though some houses still maintain the tankas since they do not like the taste of tap water.
3. (b) If you look into the housing societies or colonies in the cities, you would find that most of these have their own groundwater pumping devices to meet their water needs.
4. (a) For example, in the Sutluj-Beas river basin, the Bhakra - Nangal project water is being used both for hydel power production and irrigation. Similarly, the Hirakud project in the Mahanadi basin integrates conservation of water with flood control.
5. (b) By 2025, it is predicted that large parts of India will join countries or regions having absolute water scarcity.
6. (a) 'Rooftop rainwater harvesting' was commonly practised to store drinking water, particularly in Rajasthan as it lies in the desert region rainwater is the only abundant source here.

In the flood plains of Bengal, people developed inundation channels to irrigate their fields.
7. (c) Is it possible that an area or region may have ample water resources but is still facing water scarcity? Many of our cities are such examples. Thus, water scarcity may be an outcome of a large and growing population.
8. (a) BAMBOO DRIP IRRIGATION SYSTEM: In Meghalaya, a 200-year-old system of tapping stream and spring water by using bamboo pipes, is prevalent.
9. (c) The moment we speak of water shortages, we immediately associate it with regions having low rainfall or those that are drought-prone.
10. (b) Karnataka
11. Fill in the blank : Three fourth
12. Fill in the blank : intensive and commercial crops
13. True and False : True
14. True and False : False
15. Salal Dam is located in the Reasi district of the union territory of Jammu and Kashmir, India.
16. Importance of rainwater harvesting:
 - i. It can be a viable alternative to the big multipurpose projects.
 - ii. It is advantageous socially, economically and environmentally.

- iii. It fulfills water needs keeping in view local ecological conditions.
- iv. Water can be stored through the use of water harvesting.

17. Multi-purpose projects, launched after Independence with their integrated water resources management approach.

Jawaharlal Nehru wanted India to be a self-reliant country and to overcome the handicap of its colonial past, he launched the multi-purpose projects that not only controls flood but also useful in irrigation, power generation, fish breeding etc.

These projects were considered to bring development in villages and make a modern India. It would integrate the development of agriculture and the village economy with rapid industrialisation and growth of the urban economy. The dams were an important symbol of these projects and consequently of the modernization of India.

- 18.** i. Regulating and damming of rivers affect their natural flow causing poor sediment flow and excessive sedimentation at the bottom of the reservoir.
- ii. It leads to rockier stream beds and poorer habitats for the rivers' aquatic life.
 - iii. Dams also fragment rivers making it difficult for aquatic fauna to migrate, especially for spawning.
 - iv. The reservoirs that are created on the floodplains also submerge the existing vegetation and soil leading to its decomposition over a period of time.

19.

- A. Rooftop rainwater is collected through a pipe into the underground tanks. Rooftop rainwater harvesting is practiced in Shillong and Meghalaya where nearly 15 to 25 percent of actual water requirement is met from rooftop water harvesting.
- B. In Many parts of rural and urban India, rooftop rainwater harvesting is successfully adopted to conserve and store water.
- C. In Gandathur a village in Karnataka and nearly 200 households has installed this system. From 20 houses, the net amount of rainwater harvested amounts to 1,00,000 liters annually.
- D. In Meghalaya, Bamboo drip is practiced to transport stream and spring water by using Bamboo pipes.
- E. Several low cost techniques are now available to recharge groundwater and harvest the rainwater like, construction of proclamation ponds, refilling of dug wells and collection of rainwater and storing it in tanks or ground.

- 20.** Water scarcity is a situation when water is short in comparison to the minimum requirements for daily use. The main causes of water shortage are as follows:
- i. Growing population and need for water for domestic purposes.
 - ii. Expansion of agriculture.

- iii. Rapid urbanization and industrialization; Industries also require power to run the machinery and most of it comes from hydroelectric power.
 - iv. Bad quality of water; water may be polluted by industrial and domestic wastes, effluents from the industries, chemicals, fertilizers, and pesticides used in agriculture. All this makes water unfit for human consumption.
 - v. Overexploitation of groundwater and surface water. In developing countries like India, groundwater fulfills nearly 80% of the irrigation requirement. This has resulted in the fast depletion of groundwater sources. Free power and inefficient use of water by farmers have added to the problem of groundwater depletion.
- 21. Conservation and management of our water resources are essential due to the following reasons:**
- i. To ensure food security so that irrigation for agricultural crops can take place.
 - ii. Failing to conserve water can eventually lead to a lack of an adequate water supply, which can have drastic consequences. These include rising costs, reduced food supplies, health hazards and political conflict.
 - iii. To control the over-exploitation of water resources so that their depletion can be prevented.

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