

# Water Resources

2016

## Very Short Answer Type Question [1 Mark]

### Question 1.

Why do some people oppose dams?

### Answer:

Some people oppose dams because this may submerge the land for cultivation and disrupt the lives of the displaced people.

## Short Answer Type Questions [3 Marks]

### Question 2.

Which multipurpose project is built on River Satluj How this project has led to the development of the country?

### Answer:

The multipurpose project built over River Satluj is Bhakra Nangal.

**This project has led to the development of the country in the following ways.**

- The area under irrigation is increased as ample amount of water is released from the dam.
- It has also been successful in harnessing electricity at a large scale.

### Question 3.

Explain any two consequences of changing crop pattern due to irrigation.

### Answer:

**The following are the two consequences of changing crop pattern due to irrigation.**

- It has resulted in ecological problems like salinisation of the soil.
- It has also transformed the social landscape by increasing the gap between the rich landowners and landless poor.

2015

**Short Answer Type Question [3 Marks]**

**Question 4.**

4. Describe the procedure for rooftop rainwater harvesting.

**Answer:**

**Rooftop rainwater harvesting involves a number of steps as follows.**

- Rooftop rainwater is collected using a PVC pipe.
- The collected water is filtered by using sand and bricks.
- Water is taken to the sump through underground pipes for immediate use.
- Excess water is taken from the sump to the well.
- Water in the well recharges the underground water.

**Long Answer Type Question [5 Marks]**

**Question 5.**

Explain any three reasons due to which large dams have come under great opposition in recent years.

**Answer:**

**In recent times the dams have come under great opposition because of the following reasons.**

- The construction of dams resulted in problems like excessive sedimentation, waterlogging, soil erosion, sudden floods, large-scale deforestation, extinction of species, displacement of communities and loss of livelihood of tribal communities. Dams also fragment rivers, making it difficult for aquatic fauna to migrate especially for spawning.
- Dams that were built to control floods have triggered floods due to sedimentation in the reservoir. Big dams have been unsuccessful in controlling floods at the time of excessive rainfall. The release of water from the dams during heavy rainfall, worsens the situation.
- Multi-purpose projects cause earthquakes, water-borne diseases and pollution due to the excessive use of water.

2014

**Short Answer Type Questions [3 Marks]**

**Question 6.**

Examine the ill effects of industrialization and urbanization on water resources.

**Answer:**

After independence, India witnessed intensive industrialisation and urbanization.

**It posed great pressure on existing fresh water resources in the following ways.**

- Large industrial houses and multinational corporations use large quantities of water. They also require power to run themselves. Much of this energy comes from hydroelectric power.
- Urban centres with large and growing population have added to water and energy requirements. The housing societies have underground pumping devices to draw water



and meet their water needs.

- A large population not only needs more water but also more food. Hence water resources are overexploited to expand irrigated areas.

### Question 7.

How have intensive industrialization and urbanization posed a great pressure on existing fresh water resources in India? Explain.

#### Answer:

After independence, India witnessed intensive industrialisation and urbanization.

**It posed great pressure on existing fresh water resources in the following ways.**

- Large industrial houses and multinational corporations use large quantities of water. They also require power to run themselves. Much of this energy comes from hydroelectric power.
- Urban centres with large and growing population have added to water and energy requirements. The housing societies have underground pumping devices to draw water and meet their water needs.
- A large population not only needs more water but also more food. Hence water resources are overexploited to expand irrigated areas.

### Question 8.

Water resources are depleting fast in India and water is a necessity for life. Suggest three measures to conserve water.

#### Answer:

Water is a resource of utmost importance and waterbodies should not be polluted. Given the present scenario, even the multi-purpose projects are under objection.

**Three ways to conserve water are as follows.**

- Rainwater Harvesting: Rainwater, groundwater and river water can be harvested and used for agriculture purposes and moisten the soil.
- Do not let the faucet run while brushing teeth, bathing or cleaning vegetables.
- Check for leaks in pipes, hoses, faucets and couplings.

### Long Answer Type Question [5 Marks]

### Question 9.

Why is rooftop rainwater harvesting important in Rajasthan? Explain.

#### Answer:

**Rooftop rainwater harvesting is important in Rajasthan because of the following reasons.**

- The rainwater stored in tankas is an extremely reliable source of drinking water when all other sources are dried up.
- Rainwater is considered the purest form of natural water.
- Many houses have constructed underground rooms adjoining the tankas to beat the summer heat
- as it would keep the room clean.
- There is a lack of perennial rivers in Rajasthan.
- The rainfall is not reliable in this region.

2013

Short Answer Type Question [3 Marks]

**Question 10.**

"Water is a very important and critical resource in India." Support the statement by explaining any three points.

**Answer:**

**Water is a very important and critical resource in India. The following points support this statement.**

- Water resources are a significant part of the ecological cycle, which enable the existence of all living beings on the earth.
- Water resources help to carry out several agricultural and agriculture-related activities, thus playing a major role in the development of agricultural production.
- Water also contributes significantly to the development of industry as it supplies water to various water-based and power-based industries.

2012

Short Answer Type Questions [3 Mark]

**Question 11.**

What is palar parti? What is its significance in the arid regions of Rajasthan?

**Answer:**

The rainwater which is stored in underground tanks is potable water. It is a reliable source of drinking water. It is called palar pani.

**In the arid regions of Rajasthan, it is important in the following ways.**

- It is the main source of drinking water, when all other sources have dried up.
- It is considered the purest form of drinking water.
- In summer, these tanks would keep the underground rooms, adjoining them, clean.

**Question 12.**

Analyse three major causes of water scarcity in India

**Answer:**

**The following are the reasons for water scarcity in India.**

- **Increased demand for water:** The growing population needs more water for domestic purposes and to produce more food. Agricultural purposes: For agricultural purposes, water resources are being over-exploited. More food needs to be grown for the increasing population. Intensive industrialisation and urbanisation: The increasing number of industries ' need more water and power to run the machinery. Hydroelectric power contributes twenty-two per cent of the electricity produced. The urban centres with large population and modern lifestyles have added to the problem of water scarcity. Over-exploitation of water resources: In some cities, housing societies have their own groundwater pumping devices to meet their needs. This has caused the depletion of water resources in several areas.
- **Bad quality of water:** The water is getting polluted by domestic and industrial wastes, chemical pesticides and fertilizers.

**Question 13.**

Describe any three different rainwater harvesting systems practised in India.



**Answer:**

**The rainwater harvesting systems practised India are as follows.**

- In hills and mountainous regions, people built diversion channels likeguls or kuls for agriculture.
- Inundation canals were built in the floodplains of Bengal, to irrigate the fields.
- In arid and semi-arid regions of Rajasthan, agricultural fields were converted into room-fed storage structures that allowed the water to stand and moisten the soil.

**2011**

### **Short Answer Type Questions [3 Marks]**

#### **Question 14.**

What is a multipurpose river valley project? Give any four objectives of the multi-purpose river valley projects.

**Answer:**

Multipurpose river valley projects generally refer to large dams that serve several purposes in addition to impounding the water of a river. The water blocked is used for various purposes.

**The following are the four objectives of multi-purpose river valley projects.**

- Irrigation of water deficit areas
- Electricity generation
- Flood control
- Water supply for domestic and industrial uses
- Recreation
- Inland navigation
- Fish breeding

#### **Question 15.**

Explain three traditional methods of rainwater harvesting in India.

**Answer:**

**The rainwater harvesting systems practised India are as follows.**

- In hills and mountainous regions, people built diversion channels likeguls or kuls for agriculture.
- Inundation canals were built in the floodplains of Bengal, to irrigate the fields.
- In arid and semi-arid regions of Rajasthan, agricultural fields were converted into room-fed storage structures that allowed the water to stand and moisten the soil.

#### **Question 16.**

Why are different water harvesting systems considered a viable alternative in a country like India.

**Answer:**

**Different water harvesting systems are considered a viable alternative in a country like India because of the following reasons.**

- In ancient India, along with sophisticated hydraulic structures, there existed an extraordinary tradition of rainwater harvesting system.
- People had in-depth knowledge of rainfall regimes and soil types and developed a wide range of rainwater harvesting techniques to harvest groundwater, rainwater, river water

and flood water in keeping with the local ecological conditions and their water needs.

- For example, in the hilly and mountainous regions, people built diversion channels like guls or 'kuls' of western Himalayas for agriculture. Rooftop harvesting is practised in Rajasthan to store drinking water. In West Bengal, people developed inundation channels to divert flood waters to irrigate their fields. In semi-arid and arid regions of Rajasthan, agricultural lands were converted into rain-fed storage structures that allowed the water to stand and moisten the soil like the khadins in Jaisalmer and Johads in other parts of Rajasthan.

#### Question 17.

Why is the need for water increasing day by day? Explain three reasons.

**Answer:**

**The need for water is increasing day by day due to growing population, intensive industrialisation and urbanisation.**

- A large population means more water is required not only for domestic use but also for increasing food production. To increase food production, water resources are over-exploited to increase the area under irrigation and dry season agriculture. Some of the rich farmers have their own wells in their farms for irrigation to increase food production. This in turn has resulted in lowering of groundwater levels, which affects water availability.
- Multinational companies are the heavy users of freshwater for power, which puts tremendous pressure on water resources. Moreover, multiplying urban centres with large and dense populations and urban lifestyles have not only added to water and energy needs but have further aggravated the problem.
- In cities or housing colonies, they have their own groundwater pumping devices to meet their water needs, resulting in over-exploitation and depletion of water resources in many cities.

2010

#### Very Short Answer Type Questions [1 Mark]

#### Question 18.

On which river is the Nagarjunsagar dam built?

**Answer:**

The Nagarjunsagar Dam is built on the Krishna.

#### Question 19.

What is the traditional system of rainwater harvesting?

**Answer:**

The traditional system of rainwater harvesting is to build underground tanks or tankas for storing drinking water. This system is mainly practised in the arid and semi-arid regions of Rajasthan.

#### Question 20.

Name the river on which Sardar Sarovar dam is built.

**Answer:**

Sardar Sarovar dam is built on the Narmada.

#### Question 21.

Name the river on which Nagarjunsagar dam is constructed.



**Answer:**

The Nagarjunsagar Dam is built on the Krishna.

**Question 22.**

Name the river on which Mettur dam has been built.

**Answer:**

Mettur dam has been built the Kaveri.

**Long Answer Type Question [5 Marks]**

**Question 23.**

Explain any four reasons responsible for water scarcity in India.

**Answer:**

**The following are the reasons for water scarcity in India.**

- **Increased demand for water:** The growing population needs more water for domestic purposes and to produce more food.
- **Agricultural purposes:** For agricultural purposes, water resources are being over-exploited. More food needs to be grown for the increasing population.
- **Intensive industrialisation and urbanisation:** The increasing number of industries ' need more water and power to run the machinery. Hydroelectric power contributes twenty-two per cent of the electricity produced. The urban centres with large population and modern lifestyles have added to the problem of water scarcity.
- **Over-exploitation of water resources:** In some cities, housing societies have their own groundwater pumping devices to meet their needs. This has caused the depletion of water resources in several areas.
- **Bad quality of water:** The water is getting polluted by domestic and industrial wastes, chemical pesticides and fertilizers.

**2009**

**Very Short Answer Type Questions [1 Mark]**

**Question 24.**

What was the main purpose of launching multi-purpose projects in India after independence?

**Answer:**

The main purpose of launching multi-purpose projects after independence was that they would integrate development of agriculture with rapid industrialization.

**Question 25.**

Name two techniques of rooftop rainwater harvesting.

**Answer:**

- Construction of tanks so as to store the rainwater
- Collection of excess rainwater in the dugwell

**Question 26.**

What is the need of rainwater harvesting?

**Answer:**

Rainwater harvesting is needed to provide it for agriculture, collect drinking water, irrigate the fields and to moisten the soil.

