CBSE Test Paper - 05

Chapter - 11 Water Resources

1. The moment we speak of water shortages, we immediately associate it with regions having **(1)**

   a. high rainfall or those that are drought prone
   b. low temperature or those that are abundance water
   c. low rainfall or those that are drought prone.
   d. heavy temperature and heavy rainfall.

2. Nagarjuna sagar dam is constructed on the _____. **(1)**

   a. Cauveri rive
   b. Krishna river
   c. Narmada river
   d. Godavari river

3. A large population means more water not only for domestic use but also to produce_____. **(1)**

   a. more food
   b. more automobiles
   c. more goods
   d. hydro power

4. In the first century B.C., Sringaverapura near Allahabad had sophisticated water harvesting system channelling the flood water of the _____river. **(1)**

   a. Yamuna
   b. Indus
   c. Godavari
   d. Ganga

5. _____ of the earth's surface is covered with water. **(1)**

a. one third
b. two fourth
c. one fourth
d. Three fourth

6. What are the benefits of constructing tankas in Rajasthan? **(1)**
7. What is the most important benefit of 'hydrological cycle'? **(1)**
8. What is palar panii? **(1)**
9. The Nagarjuna Sagar Dam is built on which river? **(1)**
10. What are the main reasons for the water scarcity these days? **(3)**
11. Describe the qualitative aspects of water scarcity. **(3)**
12. Explain any three reasons due to which large dams have come under great opposition in recent years. **(3)**
13. What are the major differences between traditional dams and multi-purpose projects? **(3)**
14. Describe how modern adaptation of traditional rainwater harvesting methods is being carried out to conserve and store water? **(5)**
15. How do an increasing number of industries exert pressure on existing freshwater resources? **(5)**

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Answers

1. c. low rainfall or those that are drought prone.
   Explanation: The moment we speak of water shortages, we immediately associate it with regions having low rainfall or those that are drought prone.
2. a. (b) Krishna river
   Explanation: Nagarjuna sagar dam is constructed on the river. Krishna river in Telangana state.
3. a. more food
   Explanation: A large population means more water not only for domestic use but also to produce more food. Hence, to facilitate higher food-grain production, water resources are being over-exploited to expand irrigated areas and dry-season agriculture
4. d. Ganga
   Explanation: In the first century B.C., Sringaverapura near Allahabad had sophisticated water harvesting system channelling the flood water of the river Ganga
5. d. Three fourth
   Explanation: Three-fourth of the earth's surface is covered with water, It occurs in the form of oceans and other water bodies.
6. Tankas are underground storehouses for rainwater harvesting on the rooftop in arid and semi-arid regions of Rajasthan. The rainwater can be stored in the tankas till the next rainfall making it an extremely reliable source of drinking water when all other sources are dried up, particularly in the summers. Rooms are constructed near the tanks as the place remains cool in summer.
7. Hydrological cycle renews and recharges the fresh water which is quite essential for sustenance of life. All water moves within the hydrological cycle ensuring that water is a renewable resource.

8. In arid regions of Rajasthan, rainwater which is considered as the purest form of natural water is known as Palar pani.

9. Nagarjuna Sagar dam is built on river Krishna.

10. i. Water scarcity may be due to large and growing population and consequent greater demands for water and unequal access to it.
    ii. Large population means more water not only for domestic use but also to produce more food.
    iii. To facilitate higher food grain production, water resources are being overexploited to expand irrigated areas and dry-season agriculture.

11. According to qualitative aspects of water scarcity, it is a situation where water is sufficiently available to meet the needs of the people, but the area still suffers from water scarcity. This scarcity may be due to bad quality of water. Lately, there has been a growing concern that even if there is ample water to meet the needs of the people, much of it may be polluted by domestic and industrial wastes, chemicals, pesticides and fertilizers used in agriculture, thus, making it hazardous for human use.

12. In recent times, dams have come under great opposition because of the following reasons:

    a. Construction of dams has resulted in problems like excessive sedimentation, waterlogging, soil erosion, sudden floods, large-scale deforestation, extinction of species, displacement of communities and tribal communities losing their livelihood. Dams also fragment rivers, making it difficult for aquatic fauna to migrate especially for spawning,
    b. Dams that were built to control floods have triggered floods due to sedimentation in the reservoirs. 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.
    c. The most significant environmental effect of dams results from the displacement of human populations. Because people normally settle along rivers, where water for drinking, irrigation, power, and transport are readily available, reservoir

flooding can displace huge populations.

13. i. Traditional dams were built to impound rivers and rainwater that could be used later to irrigate agricultural fields only whereas multi-purpose projects are built now not just for irrigation but for other purpose as well.
    ii. They are used for electricity generation, supply water for domestic and industrial use. The multi-purpose projects also help in flood control,recreation, inland navigation and fish breeding. On its contrary, the traditional dams did not provide any such facilities.
14. i. 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.
    ii. In Many parts of rural and urban India, rooftop rainwater harvesting is successfully adopted to conserve and store water.
    iii. 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.
    iv. In Meghalaya, Bamboo drip is practiced to transport stream and spring water by using Bamboo pipes.
    v. 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.

15. After independence, industries are increasing at a rapid pace and have become a reason for pressure on existing freshwater resources.
    Freshwater is almost limited, though renewable in India, but over-exploitation and mismanagement of this resource by industries are aggravating the water stress day-by-day.

    i. Industrial water use includes water used for such purposes as fabricating, processing, washing, diluting, cooling, or transporting a product; incorporating water into a product; or for sanitation needs within the manufacturing facility.
    ii. According to the Central Pollution Control Board (CPCB) of India, about 500 billion cubic metre water out of the total available fresh water is used in industries annually. Out of this, about 10 billion cubic metres water is used by processing

industries and 30 billion cubic metres is used for refrigeration purposes.

iii. Industries especially heavy industries use a huge amount of fresh water for industrial purpose and pollute and waste such water.

iv. These industries for their energy consumption purpose depend on hydroelectric projects and this electricity is generated through damming the rivers upstream. So, the river almost dries in the lower stream areas.

v. Again industries dump the chemical waste in the river, lake, etc. which then consequently pollute the water dangerously for human survival.
These also contaminate the groundwater through seepage of industrial wastes. So, the increasing number of industries exert pressure on existing freshwater resources.