CBSE Test Paper 04

Ch-16 India Water Resources

1. Where is the highest replenishable water concentrated?
2. Which river basin of India has the highest percentage of replenishable utilisation of groundwater resources?
3. How does irrigation help in multi-cropping?
4. Name some of the most polluted rivers of India.
5. What is watershed management and what are its components?
6. How groundwater is used in different states of India?
7. What factors are responsible for the highest groundwater development in the states of Punjab, Haryana, and Tamil Nadu?
8. Explain watershed management. What is its aim?
9. Explain the causes of water pollution in various rivers and how can it be prevented?
10. Explain any three factors responsible for the depletion of water resources. Examine any two legislative measures for controlling water pollution in India.

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Answer

1. The Ganga and the Brahmaputra basins have about 46 percent of the total replenishable groundwater resources.
2. Ganga river basin has the highest percentage of replenishable utilisation of groundwater resources.
3. Provision of irrigation makes multiple cropping possible. Multiple cropping refers to growing more than one crop on the same field during the season. Such cropping requires adequate supply of irrigation water to grow more crops simultaneously.
4. The Ganga and the Yamuna are the two highly polluted rivers in the country.
5. Watershed management refers to efficient management and conservation to all resources natural or human made. Its components are:
   i. Conservation
   ii. Regeneration
   iii. Judicious use of all resources - natural (like land, water, plants and animals) and human
6. The groundwater is mainly utilized for agricultural irrigation. 92%of the ground water is mainly used for irrigation. The groundwater utilisation is very high in the states of Punjab, Haryana, Rajasthan, and Tamil Nadu. However, there are States like Chhattisgarh, Odisha, Kerala, etc., which utilise only a small proportion of their groundwater potentials. States like Gujarat, Uttar Pradesh, Bihar, Tripura and Maharashtra are utilising their groundwater resources at a moderate rate.
7. Groundwater development in the states of Punjab, Haryana, and Tamil Nadu has been intense due to irrigated agriculture, this is because:
   - Spatio-temporal variability in rainfall makes irrigation a necessary alternative for agriculture in the country.
   - Irrigation makes multiple cropping possible.
   - Irrigated lands have higher agricultural productivity than unirrigated land.
   - HYV crops, introduced during the Green Revolution, required a regular supply of moisture.

8. Watershed management means the proper management, use, and saving of surface and groundwater resources. Prevention of surface runoff and storage and recharge of groundwater by different methods such as percolation tanks, recharge wells, etc are done in the watershed management. But in the broader terms, the conservation, regeneration and judicious use of all-natural resources (land, water, plants, and animals) and human resources in a watershed also included in water management. Major aims of watershed management are as follows:
    i. To create a balance among natural elements as well as in society.
    ii. To enable the villagers to conserve water for various uses such as drinking, irrigation, fisheries, and afforestation.
9. The main causes of water pollution in various rivers in India are Prevention
    i. Industrial wastes, mixtures of chemicals, heavy metals are all discharged in water and these are difficult to clean up.
    ii. Agricultural wastes, chemicals, feritilisers, pesticides used in agriculture have made the river water bodies contaminated.
    iii. Domestic wastes from households and the sewage that we throw into rivers increases the pollution levels.
    iv. Regular disposal of plastic bags and plastic objects, solid wastes, flowers, garlands is another cause of pollution.
    v. People responding to nature's call in open spaces near the water bodies also contribute to river pollution.
    vi. Animals washing, car washing, clothes washing are other causes.
    vii. Another cause of river pollution is the dumping of human remains, partially burned bodies, dead bodies, which pose serious health threats.
    viii. Industries should enforce standards for water effluents;
    ix. The Pollution Control Boards must enforce the laws strictly;
    x. Adequate sewage disposal facilities should be developed, so that sewage is not directly released into the water stream;
    xi. The sewage and water treatment plant should be established by every municipal body;
    xii. For small and medium-sized industries, which cannot afford effluent plants, combined treatment plants be established;
    xiii. A pollution tax be imposed, especially on industries responsible for water

pollution;

xiv. More and more Sulabh type toilets be built;

xv. Action plans concerning water pollution should be completed within specified period; and

xvi. Above all, awareness among people about sanitation and its related impact on their health should be promoted.

10. The three factors responsible for the depletion of water resources in India are as follow: Two legislative provisions are as follows: These acts were unsuccessful as in 1997, 251 polluting factories were established along the rivers and lakes. The Water Cess Act of 1977 was also ineffective. The main reason was that they were unsuccessful in creating awareness about water conservation among people. Generation of awareness in public about the importance of water in life and the impacts of water pollution is necessary.

    i. **Increasing Population** Population in India is increasing with a higher growth rate. This growth is responsible for decreasing the availability of fresh-water and per capita availability of water.

    ii. **Industrialisation** It has increased many folds after independence. It created a major problem of water pollution in India as industrial wastes are disposed in water sources.

    iii. **Over Utilisation of Ground-water** India is an agrarian country. Thus, water is required in high amount for irrigation in agriculture. In the irrigated areas, groundwater is used to obtain maximum agriculture output. Over utilisation of groundwater in these areas has led to the declining of groundwater level. Government has taken some steps to reduce river and water pollution, but some were not effective and some were not implemented successfully.

    iv. Water (Prevention and Control of Pollution Act of 1974.

    v. Environment Protection Act (1986).