CLASS X
BIOLOGY
CHAPTER 19
THE REGIONAL ENVIRONMENT

SOLUTIONS

TEXTUAL QUESTIONS AND ANSWERS

Let us answer these (Page 337)

1. What are the advantages of construction of big dams?

Ans: The advantages of construction of big dams are:

(a) They can generate electricity and also supply drinking water to remote areas.

(b) They provide irrigation water to cultivated lands in lower areas.

(c) They also can help in checking floods and famines.

(d) They promote navigation, fishery etc.

2. What are the disadvantages of construction of big dams?

Ans: The construction of big dams has upstream as well as downstream problems:

Upstream problems:

(a) There is loss of forests, non-forest land, plants and animals.

(b) The inhabitants of the nearby area are to be displaced as the water level rises.

(c) There are changes in the fisheries and breeding ground of the fishes.

(d) There may be stagnation and water logging near the reservoir and increase in vector-borne diseases.

(e) Microclimatic changes and possibility of earthquakes.

Downstream problems:

(a) Water flow get reduced and siltation in the river.

(b) Microclimatic change.

(c) There may be intrusion of salt water at river mouth.

(d) Reduced fertility of land along the river.

(e) There may be outbreak of vector-borne diseases like malaria.

EXERCISE

1. **The construction of big dams in the river valley projects are considered to play a key role in the development process. Explain.**

   Ans: Big dams are constructed due to their multiple uses. The inhabitants have big hopes at providing employment and raising standard of living. Such big-dams have tremendous potential for economic upliftment and growth. Above all it can generate electricity necessary for power supply and establishment of industries, supply drinking water, provide irrigation water, promote navigation; fishery etc. and also can help in checking floods and famines. Thus, the constructions of big dams in the river valley objects are considered to play a key role in the development process.

2. **Write the environmental problems faced to the construction of big dams.**

   Ans: The environmental problems are as:

   (a) Loss of forests, non-forest land, agricultural land, plants and animals.
   (b) Displacement of local inhabitants.
   (c) Changes in the fisheries and their breeding ground.
   (d) Stagnation and water logging increases in vector-borne diseases.
   (e) Microclimatic change and possibility of earthquakes.
   (f) Intrusion of salt water at river mouth and reduced fertility of land along the river.

3. **What are the alternative practices to the construction of big dams to avoid serious side effects?**

   Ans: The constructions of **small dams or mini-hydel** projects are given special attention as an alternative to the construction of big dams.

4. **What are the objectives of rain-water harvesting?**

   Ans: The objectives of rain-water harvesting are:

   (a) To check the surface runoff water.
   (b) To meet the increasing demands of water.
   (c) To avoid flooding of roads.
   (d) To recharge the ground water for raising the water table.
   (e) To supplement the ground water supplies during lean season.

5. Write the methods that can be taken up for harvesting rain water.

Ans: The methods that can be taken up for harvesting rain water are given below:

(a) By storing in special storage tanks or reservoirs constructed above or below ground in high rainfall areas.

(b) By constructing pits, dug wells, lagoons or check-dams on small streams

(c) By recharging the ground water.

EXTRA QUESTIONS & ANSWERS

1. Write two method used by the people of Rajasthan for rain water harvesting.

Ans: Khadins and **Tankas** are traditional methods of rain water harvesting in Rajashthan.

2. Write one advantages of Khadins.

Ans: It is use to recharge groundwater and protected from contamination.

3. Suggest any method that you think suitable for rainwater harvesting in Manipur.

Ans: The suitable methods for rainwater harvesting in Manipur:

(a) Construction of special water storage tank or reservoirs.

(b) Construction of big community ponds.

4. "Manipur receives enough rainfall but people face scarcity of water". Why?

Ans: The reasons for Manipur receives enough rainfall but people face scarcity of water are:

(a) Due to lack of proper harvesting of rainwater

(b) Poor management system of rainwater.

5. Give an example of the environmental problem occurred due to construction of Ithai dam from Manipur river.

Ans: Loss of agricultural land, and destruction of **Loktak** wetland ecosystem **(Keibul Lamjao National Park).**

6. What is water harvesting?

Ans: Water harvesting is capturing, collection and storage of rainwater and surface runoff for filling either small water bodies or recharging ground water so that water continues to be available in non-rainy seasons.

7. **Give one advantage of recharging ground water.**

Ans: Ground water does not evaporate but spreads to provide moisture for vegetation over a large area and recharge wells.

8. **Why there is a need for the management of harvested rainwater?**

Ans: Because, it should not be contaminated and also for save use'

9. **What is the annual rainfall in India?**

Ans: The annual rainfall in India is about 120 cm.

10. **"Water is life". Give any three reasons in support of the above statement.**

Ans: Water is essential in all living organisms and they cannot survive even for few days without water because:

(a) It is needed for digestion of food.

(b) Removal of waste products.

(c) Maintenance of blood pressure.

11. **There is a shortage of drinking water when there is very high annual rainfall in North-Eastern part of India? Suggest a possible measure to overcome it.**

Ans: The remedial measures include:

By taking up proper arrangement for the storage of water and its management and promoting the use of traditional methods for rain water harvesting.

****