CBSE NCERT Class 09 Natural Resources Solved Questions paper - 3

1. Q. State the role of the atmosphere in climate control?

Ans: Atmosphere prevents sudden increase in temperature during the day light hours. It slows down the escape of heat into outer space during the night.

2. Q. How is acid rain caused?

Ans: The fossil fuels like coal and petroleum/contain small amounts of nitrogen and sulphur. When the fossil fuels are burnt, nitrogen and sulphur are burnt/and produces different oxides of nitrogen and sulphur. When these oxides dissolve in rain it gives rise to acid rain.

3. Q. What are the different ways in which water gets polluted? How does it affect the life forms?

Ans: (a) The addition of undesirable substances like fertilizers and pesticides, mercury salts in water can cause cholera produced by the bacteria.

(b) The removable of desired substances like oxygen from the water/adversely affect the aquatic organisms.

(c) A sudden change in temperature in water bodies/would be dangerous and effect their breeding. The eggs and larvae are affected by the change in temperature.

4. Q. What are the biogeochemical cycles ? Name the gas that is incorporated into life forms through photosynthesis.

Ans: The transfer of energy and matter between the biotic components of the biosphere is called biogeochemical cycle.

The gas that is incorporated into life forms through photosynthesis is carbondioxide

5. Q. What is the function of humus in soil?

Ans: Humus cause the soil to become more porous and allows water and air to penetrate deep underground

6. Q. List the causes that affect the life forms that are found in water bodies in various ways. Name the element present in coal other than carbon that releases harmful gases during combustion of coal.

Ans: (i) Excess of fertilizers and pesticides used in the farms are washed into water bodies.

(ii) Dumping of sewage from dwelling places into water bodies

(iii) Release of hot water contaminated water from industries.

(iv) Release of water from dams affect the temperature of river.

(b) Sulphur and nitrogen

7. Q. Explain how the nitrogen molecules are converted into nitrates and nitrites by

(i) Biological Process (ii) Physical process.

Ans: Biological process : Nitrogen fixing bacteria found in the root nodules of the legumes convert nitrogen molecules to nitrates and nitrites.

Physical process : During lightning, the high temperature and pressure created in the air convert nitrogen into oxides of nitrogen. These oxides dissolve in water to give nitric and nitrous acids. These acids when falls to land form nitrates and nitrites.

8. Q. What is the main cause of increase in CO_2 in atmosphere? Explain the harmful effect of increase in CO_2 content in atmosphere

Ans: Industrial revolution is the main cause of increase in carbon dioxide in the atmosphere.

Increase in carbon dioxide gives rise to green house effect. This increases global warming. This causes imbalance in nature, affects monsoons and rainfall.

9. Q. What is ozone hole ? Where is it found ? What is its effect ?

Ans: (a) In the upper regions of the atmosphere there is a layer of ozone , which gets deflected due to chlofluro carbons and created a hole that is called ozone hole.

(b) it is found above antartica/over north pole

(c) UV radiation will reach the earth and cause disease – cancer, reduce immunity, reduce crop yield.

10. Q. (a) A motor car with its glass totally closed is parked directly under the sun. The inside temperature of the car rises very high. Explain why ?

Ans: Glass trap sunlight that heats up the interior. Since glass is an insulator heat waves do not escape. Thus, Interior of the car becomes very hot similar to glass house effect.

11. Q. Why lichens do not occur in Delhi whereas they commonly grow in Manali or Darjeeling ?

Ans: Lichens are sensitive to sulphur dioxide which occur in sufficient quantity in Delhi. Delhi is semi arid – atmosphere and moisture is very low. In Manali and Darjeeling atmosphere is Humid. Sulphur dioxide pollution comparatively low.

12. Q. How are root modules useful for the plants ?

Ans Root nodules contain Nitrogen fixing bacteria. Nitrogen from atmosphere is converted into organic compounds in soil.

13. Q. Why is step farming common in hills ?

Ans This is because step farming prevents soil erosion from the fast flowing water

14. Q. Which cycle is known as the perfect cycle in biosphere? Why?

Ans. Nitrogen cycle is known as the perfect cycle in biosphere as it maintains the over all amount of nitrogen constant in atmosphere, water and soil.