



Question 1. What is meant by environment?

Answer. Environment is defined as the total planetary inheritance and the totality of all resources. It includes all the biotic and abiotic factors that influence each other. Biotic elements are all living elements — the birds, animals and plants, forests, fisheries, etc. Abiotic elements are like air, water, land, rocks, sunlight, etc.

Question 2. What happens when the rate of resource extraction exceeds that of their regeneration?

Answer. Environment includes sun, soil, water and air which are essential ingredients for the sustenance of human life. The carrying capacity of the environment implies that the resource extraction is not above the rate of regeneration of the resources and the waste generated are within the assimilating capacity of the environment. Carrying capacity of the environment helps to sustain life. Absence of carrying capacity of environment means absence of life.

Question 3. Classify the following into renewable and non-renewable resources (i) trees (ii) fish (iii) petroleum (iv) coal (v) iron-ore (vi) water.

Answer. Trees and fish are renewable resources.

Petroleum, coal, iron-ore and water are non-renewable resources.

Question 4. Two major environmental issues facing the world today are and .

Answer. Global warming and Ozone depletion.

Question 5. How do the following factors contribute to the environmental crisis in India? What problem do they pose for the government?

1. Rising population
2. Air pollution
3. Water contamination
4. Affluent consumption standards.
5. Illiteracy
6. Industrialisation
7. Urbanisation
8. Reduction of forest coverage
9. Poaching
10. Global warming.

Answer.

1. The high rate of growth of population adversely affects the environment. It certainly leads to soil and water pollution.
2. India is one of the ten most industrialised nations of the world. It has led to unplanned urbanisation, pollution and the risk of accidents. The CPCB (Central Pollution Control Board) has identified 17 categories of industries which are significant polluters.
3. Many states in India are on the edge of famine. Whatever water is available, it is polluted or contaminated. It causes diseases like diarrhoea and hepatitis.
4. With affluent consumption standards, people use more air conditioners. CFCs are used as cooling agents in air conditioners.

which leads to ozone depletion.

5. Illiteracy and ignorance about the use of non-renewable resources, alternative energy sources, lead to environmental crisis.
6. With rise in national income or economic activity, there is rise in industrialisation and urbanisation. This raises pollution of air, water and noise. There are accidents, shortage of water, housing problems, etc. In other words, with rise in national income there is ecological degradation which reduces welfare of the people.
7. Whenever there is large migration of population from rural to urban areas, it leads to fast growth of slum areas. There is excess of load on the existing infrastructural facilities. It causes environmental degradation and ill health.
8. The per capita forestland in the country is only 0.08 hectare. There is an excess felling of about 15 million cubic metre forests over the permissible limit. Indiscriminate felling of trees has led to destruction of forest cover. Once forests have been cut down, essential nutrients are washed out of the soil all-together. This leads to soil erosion. It leads to disastrous flooding since there is no soil to soak up the rain.
9. Poaching leads to extinction of wildlife. The long-term results of global warming are:
  - (a) Melting of polar ice caps with a resulting rise in the sea level and coastal flooding.
  - (b) Disruption of drinking water supplies as snow melts.
  - (c) Extinction of species.
  - (d) Frequent tropical storms and tropical diseases.

Question 6. What are the functions of the environment?

Answer. The environment performs four vital functions:

1. Environment Supplies Resources. Resources include both renewable and non-renewable resources. Renewable resources are those which can be used without the possibility of the resource becoming depleted or exhausted. In other words, a continuous supply of the resource remains available. Examples of renewable resources are trees in the forest and fish in the ocean. Non-renewable resources are those which get exhausted with extraction and use. Example, fossil fuels.
2. Environment Sustains Life. Environment includes sun, soil, water and air which are essential ingredients for the sustenance of human life. The carrying capacity of the environment implies that the resource extraction is not above the rate of regeneration of the resources and the waste generated are within the assimilating capacity of the environment. Carrying capacity of the environment helps to sustain life. Absence of carrying capacity of environments means absence of life.
3. Environment Assimilates Waste. Production and consumption activities generate waste. This occurs mostly in the form of garbage. Environment absorbs garbage.
4. Environment Enhances Quality of Life. Environment includes oceans, mountains, deserts, etc. Man enjoys these surroundings, adding to the quality of life.

Question 7. Identify six factors contributing to land degradation in India.

Answer. Some of the factors responsible for land degradation are:

1. Loss of vegetation occurring due to deforestation
2. Unsustainable fuel wood and fodder extraction.
3. Shifting cultivation
4. Encroachment into forest lands
5. Forest fires and over grazing

6. Non-adoption of adequate soil conservation measures.

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