CBSE Test Paper-01

Chapter 14 Environment Sustainable Development

1. A UN Conference on Climate Change, held in _____ in 1997, resulted in an international agreement to fight global warming which called for reductions in emissions of greenhouse gases by industrialised nations. **(1)**

    a. Chine
    b. USA
    c. Japan
    d. Brazil

2. Following are abiotic elements except **(1)**

    a. Water
    b. Land
    c. Air
    d. Plants

3. What do we mean when we say "think globally, act locally" in relation to environmental problems **(1)**

    a. Global environmental problems are essential issues
    b. Environmental problems have to be thought about at a global level
    c. Extensive research and thinking has been carried out by global level
    d. Think about global impact of local activities

4. India heavily depends on _____ and _____power plants. **(1)**

    a. None of given
    b. thermal, hydro
    c. CNG, solar
    d. solar, gobar gas

5. What are the important environmental issues which should receive our attention? **(1)**

6. What do you mean by global warming? **(1)**

7. How can mini-hydel plants sustain environment? **(1)**
8. How is solar electricity made? In which places it can be used? **(1)**
9. Explain the term ‘affluence trap’. **(3)**
10. List some of the priority environmental issues of India today. **(3)**
11. Give two examples of **(4)**
    a. Overuse of environmental resources.
    b. Misuse of environmental resources.
12. How has population explosion and the advent of industrial revolution resulted in environmental crisis? **(4)**
13. Differentiate between biotic and abiotic elements of environment. **(4)**
14. Give the benefits and limitations of using solar power. **(6)**
15. Explain the relationship between environment and the economic development. **(6)**

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Answers

1. c. Japan
   Explanation: A UN Conference on Climate Change, held at Kyoto, Japan, in 1997, resulted in an international agreement to fight Global Warming which called for reductions in emissions of greenhouse gases by industrialised nations.
2. d. Plants
   Explanation: All living elements are biotic like birds, animals and plants, forests, fisheries, etc... whereas all non- living elements are abiotic like air, water, land, etc...
3. d. Think about global impact of local activities
   Explanation: It means to consider the health of the entire planet rather of the locality we live in. Long before governments began enforcing environmental laws, individuals were coming together to protect habitats of the organisms that lived within them.
4. b. thermal, hydro
   Explanation: Some resources are underutilised which produced electricity. Thermal and hydroelectric can be produced in the country.
5. The important environmental issues which should receive our attention are:
   i. Land degradation
   ii. Biodiversity loss
6. Global warming is a gradual increase in the average temperature of the earth's near-surface air and the oceans ever since the mid-twentieth century and its projected continuation.
7. Mini-hydel plants generate electricity with the help of water of a stream flowing in the mountainous region. Mini-hydel plants are environment friendly as they do not

change the land use pattern in areas where they are located. Also, they generate enough power to meet local demands.

8. Concentrated solar power systems use lenses or mirrors and tracking systems to focus a large area of sunlight into a small beam. With the help of photovoltaic cells, solar energy can be converted into electricity. This technology is extremely useful for remote areas and for places where the supply of power through grid or power lines is either not possible or proves to be very costly.

9. In a layman's words, affluence means economic well being and trap is something in which we get caught and we can not escape out of it. In economic terms, Affluence trap means environmental degradation trap. When a nation becomes more affluent (economic well being of all), it uses up more natural resources in order to provide for the necessities of its people. This over usage of natural resources causes environmental problems.

   In the rich countries of the developed world, the high level of consumption associated with the high level of income is using up natural resources at a fast pace; As a consequence, these countries are getting trapped into a situation of severe environmental degradation.

10. Major environmental issues of India today are forest and agricultural degradation of land, resource depletion (such as water, mineral, forest, sand, and rocks), public health, loss of biodiversity, loss of resilience in ecosystems, livelihood security for the poor and air pollution with special reference to vehicular pollution in urban cities.

11. Examples of overuse of environmental resources and misuse of environmental resources are as under:-

    a. Overuse of environmental resources
        i. Soil degradation due to improper crop rotation and crop shifting.
        ii. Drying up of fivers due to overuse of water from them through dams and reservoirs.
    b. Misuse of environmental resources
        i. Excess use of electricity leads lo depletion of resources like coal and water from which electricity is generated.

ii. Excess use of petrol and diesel in vehicles.

12. With population explosion and with the advent of industrial revolution, to meet the growing needs of the expanding population, the demand for resources for both production and consumption has gone beyond the rate of regeneration of the resources and due to this, the pressure on environment has increased tremendously. The increasing population has led to increased demand for housing and this has led to widespread deforestation. In order to accelerate the process of industrialisation, natural resources are being used up at a much faster pace. We are now faced with increased demand for environmental resources and services but their supply is limited due to overuse and misuse of these resources. Hence, the environmental issues of waste generation and pollution have become critical today.

13.

	Biotic	**Abiotic**
Meaning	**Biotic** factors are living or once-living organisms in the ecosystem. These are obtained from the biosphere and are capable of reproduction.	**Abiotic** factors refer to non-living physical and chemical elements in the ecosystem. Abiotic resources are usually obtained from the lithosphere, atmosphere, and hydrosphere.
Example	Examples of biotic factors are animals, birds, plants, fungi, and other similar organisms.	Examples of abiotic factors are water, air, soil, sunlight, and minerals.
Function	Biotic components shape an ecosystem and are the living components in the organism's environment.	Abiotic factors affect the living organisms in a community. In a barren ecosystem new organisms start colonizing the ecosystem. They depend on the environmental components to thrive well in the system.

14. Following are the benefits associated with solar power:

    i. It is pollution free and causes no greenhouse gases to be emitted after installation.
    ii. Reduced dependence on foreign oil and fossil fuels.
    iii. Renewable clean power that is available every day of the year, even cloudy days produce some power.
    iv. Return on investment unlike paying for utility bills.
    v. Virtually no maintenance as solar panels last over 30 years.
    vi. Creates jobs by employing solar panel manufacturers, solar installers, etc. and in turn, helps the economy.
    vii. Excess power can be sold back to the power company if grid intertied.
    viii. Ability to live grid free if all power generated provides enough for the home/building.
    ix. Can be installed virtually anywhere; in a field to on a building.
    x. Use batteries to store extra power for use at night.
    xi. Solar can be used to heat water, power homes and building, even power cars.

    Following are the limitations associated with solar power:

    i. It is not suitable for areas where sunlight is less or which are generally overcast.
    ii. Solar power is not available at night.
    iii. The initial cost of establishing solar panels is more and it requires active action by the consumers.

15. There are two views on how economic development affects the environment. They are as follows:

    - According to the first view, economic development degrades our environment by using natural resources for production of goods and services. Economic development results in pollution in the form of air pollution, water pollution and land pollution.
    - According to the second view, economic development improves environmental quality. The discovery of new materials and sources not only use less natural resources, but sometimes replace them. Thus, with economic development, degradation of environment decreases.

From the above discussion, we find that relationship between environment and economic development is dynamic and complex.

Poverty in developing countries is also said to be responsible for environmental degradation. Poor people rely on natural resources more than the rich. For survival, the rural poor are forced to cut forests for timber and fuel as well as grazing animals on pasture lands more than the reproductive capacity of these natural resources.

Besides, when the cultivable land becomes short relative to population, the poor are forced to make their subsistence by cultivating fragile land on hills and mountains resulting in soil erosion on a large scale. It is in such environment that poverty becomes a vicious circle. Poverty leads to land degradation and land degradation accelerates the process of impoverishment because poor people depend directly on the exploitation of natural resources on which property rights are not properly assigned.

Undoubtedly, economic development leads to excessive extraction of natural resources and generation of pollutants, but it introduces new processes, materials and discoveries. We should be careful and ensure that economic development should not damage the environment.