

# ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

## Multiple Choice Type Questions

1. Which of the following is not a biotic element?
  - a. Birds
  - b. Sunlight
  - c. Forests
  - d. Animals
2. Which of the following is a renewable resource?
  - a. Fish
  - b. Coal
  - c. Petroleum
  - d. Iron-ore
3. Which of the following is an impact of global warming?
  - a. Deforestation
  - b. Rise in sea level
  - c. Waste generation
  - d. Rapid increase in population
4. In which of the following layers of the atmosphere is ozone shield found?
  - a. Troposphere
  - b. Exosphere
  - c. Stratosphere
  - d. Mesosphere
5. Which of the following is a consequence of ozone layer depletion?
  - a. Skin cancer in humans
  - b. Lower production of phytoplankton
  - c. Hampers growth of terrestrial plants
  - d. All of the above

## Answer

1. (b)      2. (a)      3. (b)      4. (c)      5. (d)

## SHORT ANSWER QUESTIONS

1. Distinguish between renewable and non-renewable resources.

**Answer:** The following are the points of difference between renewable and non-renewable resources:  
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Renewable Resources	– renewable Resources
Renewable resources are those which can be used without the possibility of the resource becoming depleted or exhausted.	Non- renewable resources are those which get exhausted with extraction and use.
Example:- Trees, Fish, Water etc	Examples:- Petroleum, coal, iron – ore, etc

2. State some long-term impacts of global warming.

**Answer:** Some long-term impacts of global warming are:

- Melting of polar ice
- Rise in sea level
- Frequent coastal flooding and tropical storms
- Disruption of drinking water supplies
- Extinction of species
- Increased incidence of tropical diseases

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- (vi) Increased incidence of tropical diseases

4. Write short notes on the following:

- (i) Solar energy
- (ii) Mini-hydel plant

**Answer:**

(i) **Solar energy**:- can be converted into electricity with the help of photovoltaic cells. These cells use semi-conductive materials to capture solar energy and then convert the energy into electricity. It is a pollution-free technology, which is extremely useful for such places where power supply through grid or power lines is either not possible or very costly.

(ii) **Mini-hydel plants**:- use the energy of perennial streams to move small turbines. These turbines generate electricity, which can be used locally. Mini-hydel power plants are environment-friendly source of energy generation. Such plants are capable of generating enough power to meet local demands.

## LONG ANSWER QUESTION

1. Define the term 'Global Warming'? What are its main causes?

**Answer:** Global warming is a gradual increase in the average temperature of the earth's lower atmosphere as a result of the increase in greenhouse gases since the advent of industrial revolution.

**Following are the main causes of global warming:**

(i) **Buildup of Carbon Dioxide**: Increase in the level of carbon dioxide in the atmosphere due to burning of fossil fuels is the most significant human cause of global warming.

(ii) **Deforestation**: Deforestation means clearing the forest to make the land available for other uses. All living plants store carbon. As forest and grassland are cleared for use, enormous amount of carbon dioxide is released back into the atmosphere.

(iii) **Methane's Impact**: When we consider the effects of methane within a single decade, it is 100 times as powerful as carbon dioxide as a greenhouse gas. Methane's has the potential to have significant impacts on the future of global warming.

iv) **Increased Use of Fertilisers**: With the advent of green revolution, the use of chemical fertilisers and machines to produce food has increased significantly. One of the primary components of the green revolution is nitrogen fertilisers, which have 300 times more heat trapping capacity per unit of volume than carbon dioxide. Hence, these contribute towards global warming.

(v) **Other Causes**: Chlorofluorocarbons (CFCs) and hydro chlorofluorocarbons (HCFCs) used in refrigerator are also powerful greenhouse gases. These gases occur in lower concentration in the atmosphere but as they are so comparatively more potent than carbon dioxide, they contribute to global warming as well.

2. Suggest some measures to prevent environmental degradation.

**Answer:** The following measures are needed to prevent environmental degradation:

(i) **Population Control**: Rising population is a threat to the country. Therefore, it is absolutely essential to check the rising population if environment is to be protected.

(ii) **Proper Implementation of Environment Conservation Acts**. In India the Environment Protection Act was passed in 1986. The objective of this Act is to check degradation in the quality of environment. Therefore, this Act should be strictly implemented.

(iii) **Social Awareness**: Social awareness must be spread among the people to understand the dangerous consequences of pollution. This will ultimately save the environment.

(iv) **Afforestation Campaign**: Plantation should be done on a large scale for the protection of environment.

(v) **Water Management**: For the protection of environment, provisions must be made to supply clean drinking water to the people. A so river water should be made clean.

(vi) **Improvement in Housing**: For the protection of environment living places of the people should be made neat and clean. Slums must be replaced by airy and well-lighted dwelling houses.

(vii) **Solid Waste Management**: Solid waste management in a planned way is very essential in the country. Solid waste should be treated chemically. In this connection, rural garbage must be converted into compost for the protection of environment.

3. Explain the objectives of sustainable development.

**Answer:** The objectives of sustainable development are:

(i) **Sustained Rise in Real per Capita Income and Quality of Life**: The main objective of the sustained development is to maintain the remarkable level of real per capita income and the quality of life.

(ii) **Reduction in Pollution**: Sustainable development aims to discard those activities which prove to be detrimental to the natural resources and environment. Thus, reduction in the pollution at any cost is its main objective.

(iii) **Rational Use of Natural Resources**: Its means that people should avoid excessive or unnecessary exploitation of natural resources.

(iv) **Fulfilling the Requirements of Future Generation**: Sustainable development aims to minimize environmental problems and meet the needs of the present, generation without compromising the ability of the future generation to meet their own needs.

4. Differentiate between economic development and sustainable development.

**Answer:**

The following are the points of difference between economic and sustainable development:

<b>Economic Development</b>	<b>Sustainable Development</b>
Economic development refers to the long - term increase in real per capita income and economic welfare.	In sustainable development, besides the increase in real per capita income, the welfare of the present and future generation is taken into consideration
2. It does not account for the exploitation of natural capital	Sustainable development emphasises on rational utilisation of natural resources.
It is generally used in the context of undeveloped economies.	It is used for developed, developing as well as underdeveloped economies.
It lays special stress on the structural technical and institutional changes in the economy.	It does not lay such stress on the structural, technical and institutional changes in the economy.
It does not emphasise on environmental protection.	It gives main emphasis on environmental protection.