

CBSE Test Paper-02
Chapter 14 Environment Sustainable Development

1. Which of the following is the most sustainable product? **(1)**
 - a. Wild blueberries collected from a national forest
 - b. Corn grown in an industrialized farm as cattle feed
 - c. Locally produced orange grown using limited amounts of pesticides
 - d. Apple slices bought from McDonald's
2. Estimates of soil erosion show that soil is being eroded at a rate of ____ excess of the recharge capacity. **(1)**
 - a. 4.3
 - b. 2.5
 - c. 5.3
 - d. 3.5
3. Global warming is a **(1)**
 - a. Gradual decrease in the daily temperature of the earth's lower atmosphere.
 - b. gradual increase in the average temperature of the earth's atmosphere.
 - c. Gradual decrease in the average temperature of the earth's lower atmosphere.
 - d. Gradual increase in the daily temperature of the earth's lower atmosphere.
4. India has ____% of human and ____ % of livestock population with only ____% of land area when compared with world. **(1)**
 - a. 2.5, 16.7, 20
 - b. 20, 25, 2.5
 - c. 17, 20 , 2.5
 - d. 16.6, 20, 2.5
5. Name two movements to prevent cutting of trees. **(1)**
6. People are resorting to cut trees to facilitate the process of urbanisation and industrialisation. Are they justified in cutting trees to fulfil their stated needs? **(1)**

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7. Name a pesticide which is environment friendly. **(1)**
 8. What is Sustainable Development? **(1)**
 9. Are you aware of the items that can be recycled? Make a list of it. **(3)**
 10. A truck driver had to pay Rs. 2,000 as challan as his truck was emitting black soot. Why do you think he was penalised? Was it justified? Give reasons. **(3)**
 11. Differentiate between renewable and non-renewable resources. **(4)**
 12. What is carrying capacity of the environment? How is it related to sustainable development? **(4)**
 13. State the strategies for sustainable development in India. **(4)**
 14. 'Today development has become a burden on nature/environment'. Comment. **(6)**
 15. Highlight any two serious adverse environmental consequence of development in India. **(6)**

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Answers

1. a. Wild blueberries collected from a national forest

Explanation: Wild berries ,collected from national forests are completely natural without any use of pesticides.Thus, providing economic,social and environmental benefits while protecting public health over a long period of time.

2. c. 5.3

Explanation: Estimates of soil erosion show that soil is being eroded at a rate of 5.3 billion tonnes a year for the entire excess of the recharge capacity.

3. b. gradual increase in the average temperature of the earth's atmosphere.

Explanation: Global warming is a gradual increase in the average temperature of the earth's atmosphere. It is caused by man-made increase in carbon dioxide and other greenhouse gases through the burning of fossil fuels and deforestation.

4. c. 17, 20 , 2.5

Explanation: India has about 17% of the world's total human population and 20% of the world's total animal population, whereas, it has only 2.5% of world's total geographical area.

5. Two movements to prevent cutting of trees are:

- i. Chipko
- ii. Appiko

6. No, cutting down of trees is not justified at all as it leads to serious environmental problems related to soil erosion and desertification. It also adversely affects the groundwater table. The life of animals and birds is also adversely affected. Doing so will lead to global warming also making our life difficult on this planet. So, industry and environment must co-exist.

7. Neem based pesticide.

8. It is that process of development which meets the needs of present generation without reducing the ability of future generation to meet their own need. This concept stresses the role of the environment as capital that, if exhausted, cannot be replaced. It requires preservation of human capital, physical capital and natural capital.
9. Following are the items that can be recycled:
- i. All Metals
 - ii. Plastic
 - iii. Lead
 - iv. Paper
 - v. Cartoons
 - vi. Bottles
 - vii. E- waste like CDs, chargers, floppies etc.
10. He was penalised because of the rules of Pollution Control Board. As per the rules, an owner of a vehicle needs to keep it under pollution control for which he needs to get is serviced regularly and obtain a certificate of "pollution under control" from an authorised station. It was justified because the negative opportunity cost of environment degradation is irreversible and hence we need to take preventive steps. Paying penalty is actually the extent of negative externality the truck driver has given to society. Once the environment is polluted, it can't be cured so it must be prevented before hand.
11. Difference between renewable and non-renewable resources is summarised below:

Basis	Renewable resources	Non-Renewable resources
Meaning	Renewable resources are those which can be used without the possibility of the re- source becoming depleted or exhausted. i.e. a continuous supply of the resource remains available.	Non-renewable resources are those which get exhausted with extraction and use.
Example	Examples of renewable resources are the trees, water, sunlight, wind etc.	Petroleum, coal etc.

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12. Carrying capacity of the environment implies that the resources extraction is not above the rate of regeneration of the resources and the wastes generated are within the assimilating capacity of the environment.

It is related to sustainable development because development is sustainable as long as an economy is operating within carrying capacity of the environment. As soon as we cross carrying capacity, we start facing the problem of environment degradation and development is not sustainable anymore. If these two conditions are not fulfilled, then environment fails to perform its vital functions of life sustenance and it leads to the situations of environmental crises.

13. Sustainable development means a judicious or optimum utilisation of resources in such a manner that the pace of economic growth sustains with inter-generational equity.

The following are the strategies of attaining sustainable development:

- i. **Use of Environment Friendly Fuel:** The growing use of fuel such as petrol and diesel emits a huge amount of carbon dioxide that adds to the Green House impact. In order to control pollution, the use of CNG and LPG should be promoted. These fuels are cleaner fuels, smokeless and eco-friendly.
- ii. **Use of Renewable Resources:** India is well enriched with sunlight, water and wind energy. These are the free gift of nature that are non-exhaustible and pollution free. Thus, attempts should be made to harness solar and wind energy by employing different technologies. It not only solves the problem of economic growth but also the problem of sustainable economic development.
- iii. **Recycling:** The industrial and household wastes should be accumulated on daily basis. These wastes should be distinguished as bio-degradable and non-biodegradable wastes. The bio-degradable wastes are those wastes that can be decomposed and can be used as manure for organic farming. The non-biodegradable wastes like plastic, etc. can be recycled and re-used.
- iv. **Use of the Input Efficient Technology:** The input efficient methods and techniques should be devised so that more production is possible at per unit of input. This efficient utilisation of natural resources leads to lesser exploitation of natural resources.

14. Developmental activities exert tremendous pressure on our natural resources of a country and it also has an effect on human health and well being. We see that there is overutilization of the natural resources and a lot of environmental problems are arising due to excessive use of modern equipment and technology. Following are some important reasons responsible for the heavy burden on nature :

- i. Increase in population causes exploitation of natural resources such as forests, water, fisheries and minerals at a rate far greater than their capacity to regenerate. As such, there is a degradation of resource in the name of development.
- ii. Population pressure on land compels us to cultivate the available land more intensively by using chemical inputs such as fertilizers, pesticides which causes degradation of the soil.
- iii. Further, the increase in population has increased the demand for fuel and timber and people resort to the cutting of trees for the same. With a reduced number of trees, there is an increase in carbon dioxide in the atmosphere and this causes air pollution. Also, industries and vehicles are major pollutants and affect the health of the people.
- iv. Global Warming and ozone depletion are other consequences of development.

15. Two serious adverse environmental consequences of development in India are as follows:-

This is true that India's environmental problems pose a dichotomy-they are poverty induced and, at the same time due to affluence in living standards one hand, population explosion and widespread poverty has led to deforestation in India as the poor people in the rural areas are compelled to fell trees for earning their livelihood and for use as fuel, on the other hand, the growing demand for natural resources due to affluence in living standards in the urban areas is also equally responsible for the present environmental degradation. There have been rise in pollution due to-rapidly growing industrial sector and the expansion of vehicular traffic as a result of high conspicuous consumption.

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- i. **Land Degradation:** Land in India has suffered degradation stemming mainly from unstable use and inappropriate management practices during the development process. The factors responsible for land degradation are
- a. Loss of vegetation occurring due to deforestation.
 - b. Unsustainable fuel, wood and Fodder exaction.
 - c. Extraction of ground water in excess of the recharge capacity.
 - d. Non-adoption of adequate soil conservation measures.
 - e. Improper crop rotation.
- ii. **Air and Water Pollution:** In India, air pollution is widespread in urban areas where vehicles are the major contributors and in a few other areas which have a high concentration of industries and thermal power plants. In 2003, personal, transport vehicles (two-wheeled vehicles and cars only) constituted about 80% of the total number of registered vehicles. Thus contributing significantly to total air pollution load. Water bodies (e.g., lakes, rivers, oceans aquifers and groundwater) are contaminated when pollutants are discharged from industries directly or indirectly into water bodies without adequate treatment to remove harmful compounds. Water contamination affects plants and organisms living in these bodies of water. The effect is damaging not only to individual species and populations, but also to the natural biological communities.