

CBSE Test Paper-03
Chapter 14 Environment Sustainable Development

1. ____ is the cost of next best alternative sacrificed in order to take benefit of one given opportunity. **(1)**
 - a. Opportunity cost
 - b. Absorptive capacity
 - c. Assimilation capacity
 - d. Carrying capacity
2. Ozone layer prevents most harmful wavelengths of ____ light from passing through the earth's atmosphere. **(1)**
 - a. Gama violet
 - b. Beta violet
 - c. None
 - d. Ultraviolet
3. "Sustainable development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs." This definition given by **(1)**
 - a. None
 - b. UNCED
 - c. Edward Barbier
 - d. Brundtland Commission
4. Which of the following factor not responsible for land degradation. **(1)**
 - a. Improper crop rotation
 - b. Gain of vegetation occurring due to deforestation
 - c. Unsustainable fuel wood and fodder extraction
 - d. Shifting cultivation
5. Name animals/birds which help in bio pest control. **(1)**

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6. Name two diseases caused by air pollution, water pollution and noise pollution each. **(1)**
 7. Why water has become an economic commodity? **(1)**
 8. What is meant by environment? **(1)**
 9. Explain natural resources. **(3)**
 10. 'Sustainable development is a paradigm shift in development thinking'. Comment. **(3)**
 11. What is global warming? How does it affect us? **(4)**
 12. Mention four important causes of environmental degradation. **(4)**
 13. How are environment and economy interdependent? **(4)**
 14. How does air pollution contribute to the environmental crisis in India? **(6)**
 15. What measures were adopted by India for environment conservation? **(6)**

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Answers

1. a. Opportunity cost

Explanation: Opportunity cost is the cost of forgone alternative assuming we selected its best alternative use.

2. d. Ultraviolet

Explanation: The ozone layer prevents most harmful wavelengths of ultraviolet light from passing through the Earth's atmosphere.

3. d. Brundtland commission

Explanation: The term and definition of sustainable development were given by Brundtland commission which published it in 'Our Common Future'. Later on the report was published in 1987 by UNCED.

4. b. Gain of vegetation occurring due to deforestation

Explanation: Nowadays, people cut trees a lot and use that place for their own purpose. For example- Agriculture, Business, Building etc.

5. Snakes, owls, peacock, lizards.

6. Air Pollution: Asthma and lung cancer

Water Pollution: Diarrhea and cholera

Noise Pollution: Hearing problems and hypertension

7. It has happened due to supply-demand reversal. Earlier supply of drinking water was more than its demand and hence it was available at zero price but now demand for drinking water is much more than supply of drinking water. It has made water an economic commodity.

8. Environment includes all the biotic (e.g., birds, animals, plants, forests, etc) and abiotic (e.g., water, Sun, land, mountains, etc) factors that influence and depend upon each other.

9. Natural resources are the resources which have been provided by nature in the form

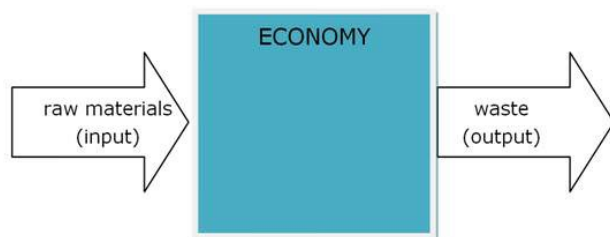
of land, air, water, forests, animals, sunshine, etc. Natural resources are free gifts of nature. In other words, natural resources are useful raw materials that we get from the Earth. They occur naturally, which means that humans cannot make natural resources. Instead, we use and modify natural resources in ways that are beneficial to us. The materials used in human-made objects are natural resources. They are the foundation of the prosperity of a country.

Natural resources may be of two types

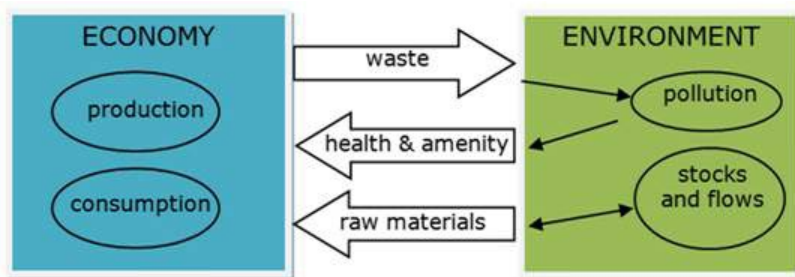
- i. Renewable natural resources
- ii. Non-renewable natural resources

10. Sustainability is a paradigm for thinking about a future in which environmental, social and economic considerations are balanced in the pursuit of development and an improved quality of life. World population is projected to increase [by around 2 billion] by 2050. Practically all that growth will be in the developing countries of Asia and Africa. This will put increased strain on resources and systems that are already insufficient in many cases (Emerging Risks in the 21st Century: An Agenda for Action). The sustainability paradigm is a major change from the previous paradigm of economic development with its damaging social and environmental consequences. Until recently these consequences have been seen as inevitable and acceptable.
11. Global warming is the rise in the general temperature levels on earth which happens due to increase in the quantity of green house gases like carbondioxide, methane etc. It affects us because environment is our basic need of survival and it affects our environment.
 - a. It is causing glaciers to melt due to which many areas are prone to floods.
 - b. It is increasing climatic disturbances which caused winters and summers to delay.
 - c. Water level is rising in the sea and oceans because of increase in water from melting.
 - d. People's electricity consumptions are increasing to counter it as they need fans to remain cool.
12. Four important causes of environmental degradation are as follows:
 - i. Population explosion and industrial revolution has increased the demand for environmental resources, but their supply is limited due to misuse and overuse.
 - ii. The intensive and extensive extraction of both renewable and non-renewable resources has exhausted some of the vital resources.

- iii. Extinction of many resources and continuous rising population has also resulted in environmental crisis.
 - iv. The development process has polluted environment, water and atmosphere and there is decline in air and water quality. It has resulted in increased incidence of respiratory and water-borne diseases.
13. Prior to the advent of natural resource and environmental economics, economists paid relatively little attention to the relationship between the economy and the environment, partly because, in the early days of neoclassical economics, the economy did not appear to face major environmental constraints and also because environmental issues were considered less important than economic growth. The economic system received inputs from the environment and delivered waste back to the environment (as depicted in 2.1.1) but little attention was given to how the extraction of inputs might affect the environment or the environment's ability to deliver those inputs to the economy in the future. Nor was much thought given to the impact of putting waste back into the environment.



Raw materials from the environment provide economic benefits, but their current extraction, in turn, affects the prospects of future extraction (hence, the two-way arrow in below fig.). This is the particular concern of natural resource economics. The figure also shows waste from production and consumption which cause pollution and feeds back to the economy via the latter's negative impact on human health and amenity values. These relationships can be analysed using the tools of environmental economics.



14. In India, air pollution is widespread in urban areas. Vehicles, a high concentration of

industries and thermal power plants are the major contributors to air pollution. Vehicular emissions are of particular concern since these are ground level sources and thus, have the maximum impact on the general population. Air pollution contributes to the environmental crisis in India in the following ways:

- i. **Vehicular Emissions:** Vehicular emissions are a source of fossil fuel emissions and air pollution. The gases emitted from vehicles like trucks, jeeps, cars, trains, aeroplanes cause an immense amount of pollution. Sulphur dioxide emitted from the combustion of fossil fuels like coal, petroleum and other factory combustibles is another major cause of air pollution.
 - ii. **Agricultural activities:** The Indian state of Punjab has two growing seasons—one from May to September and another from November to April. In November, Punjab farmers typically sow crops such as wheat and vegetables, but before they do that, farmers have to prepare their fields for the second season. For this, they set fire to their fields so that the fields are ready for the next crop. This increases air pollution in Delhi and NCR area as the fumes from this crop burning come towards Delhi and NCR areas.
 - iii. **Power Plants:-** India is the world's second largest coal burner after China, generating 210 GW of electricity a year, mostly from coal. But it is likely to become the largest if plans to generate a further 160 GW annually are approved. Fossil fuel emissions contain the major greenhouse gases, including carbon dioxide, methane, nitrous oxide and fluorinated gases which are the major air pollutants.
 - iv. **Electronic waste:-** About 80% of e-waste from developed countries is illegally exported to developing countries especially China, India and Pakistan because of the lower labour costs and lack of government regulations. A large number of people in India are involved in unscientific dismantling, crude chemical leaching of printed circuit boards, burning of wires/waste electrical and electronic components, grinding of residues, washing of metal rich residue (milled black powder).
15. Though India has successfully incorporated environmental aspects into the policy framework way back in 1985, it is in the previous decade, more especially since 2014, proactive environment conservation initiatives were undertaken by the Union Government.

New methods to deal with environmental issues are :

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- i. **Public Private Partnership:** Previously, the government was alone responsible for funding and executing the environment conservation measures. Over the last three years, the emphasis was on public private partnership (PPP) to leverage the capital, technology and human resources available to the private sector. For instance, PPP Model was adopted for forest conservation.
 - ii. **Use of technology:** The information and communication technology has been leveraged to a great extent for real time monitoring of pollutants from industries, status of natural resources and wildlife and address grievances.
 - iii. **Active International Collaboration:** It includes collaborations at the bilateral and multilateral level for the protection of the environment. It is evident from the signing of bilateral agreements and MoUs on renewable energy resources with the developed countries like the USA and Germany, the submission of Intended Nationally Determined Contribution (INDCs) to the UNFCCC and the ratification of the Paris Climate Agreement on 2 October 2016.
 - iv. **Timely amendment of Rules:** The policy environment has become dynamic to address ever growing environmental challenges. The release of separate notifications specifying rules for management of E-Waste, Plastic Waste, E-Waste, Construction & Demolition Waste and Biomedical Waste in 2016 indicate the government's intention to alter the decades-long policy eco-system.
 - v. **Procedural Reforms:** The procedural reforms were aimed at increasing the transparency, curbing red tape in environmental clearances and decentralization in decision making. The launch of the Web Portal for obtaining Coastal Regulation Zone (CRZ) Clearances is outcome of this reform.