

CBSE Test Paper 02
Ch-16 Environmental Issues

1. Endemism refers to
 - a. The distribution of species at a cosmopolitan distribution and Distribution of certain species in a restricted area
 - b. Distribution of certain species in a restricted area
 - c. A common feature of all organisms seen in the biosphere
 - d. The distribution of species at a cosmopolitan distribution
2. A lake receiving nutrients would be
 - a. Eutrophic
 - b. Sink
 - c. Rich in fossils
 - d. Oligotrophic
3. Almost 40% of forest is lost in
 - a. Temperate regions
 - b. Equatorial regions
 - c. Tropical regions
 - d. Polar regions
4. For pollution control
 - a. Fly ash generated on burning coal can be used to manufacture bricks.
 - b. Bottles of soft drinks can be used for making fibers for carpeting.
 - a. Only a
 - b. both a & b
 - c. Only b
 - d. none of these are feasible.
5. Acid rain is due to
 - a. Automobile pollution
 - b. Pesticide pollution
 - c. Water pollution
 - d. Air pollution
6. What is meant by ozone hole? Which unit is used for measuring ozone thickness?

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7. DDT decreases as it pass upward from one trophic level to another.(True/False)
 8. Name the most widely used method of removing particulate matter.
 9. A factory drains its waste water into the nearby lake. It has caused algal bloom.
 - (a) How was the algal bloom caused?
 - (b) What would be the consequences?
 - (c) Name the phenomenon that caused it?
 10. Mention the information that the health workers derive by measuring BOD of water body.
 11. Discuss briefly the Defunct ship and e-waste.
 12. Discuss the role of women and communities in protection and conservation of forests.
 13. Richa was walking through a village. She saw a group of women quarrelling near a well. She moved forward to know what was going on and came to know that the quarrel was on fetching water. She immediately solved the problem by telling them a story on how birds also solved their problem.
 - i. What values of Richa can be observed here?
 - ii. Give a scientific interpretation of sharing a common resource by animals.
 - iii. Provide an example from your text.
 14. Why ozone hole forms over Antarctica? How will enhanced ultraviolet radiation affect us?
 15. Discuss the causes and effects of global warming. What measures need to be taken to control global warming?

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Answer

1. b. Distribution of certain species in a restricted area, **Explanation:**
Endemism is the ecological state of a species being unique to a defined geographic location, such as an island, nation, country or other defined zone, or habitat type; organisms that are indigenous to a place are not endemic to it if they are also found elsewhere.
2. a. Eutrophic, **Explanation:** A lake receiving nutrients would be eutrophic. This nutrient accumulates in lake water and cause eutrophication. It will become difficult for other organism to survive in such kinds of water.
3. c. Tropical regions, **Explanation:** Almost 40% of forest is lost in tropical regions of the world as compared to only percent of temperate regions. Forest are absent in polar regions.
4. b. both a & b, **Explanation:** Pollution can be controlled by a number of methods. The most common use of fly ash is as a partial replacement for portland cement used in producing concrete. Replacement rates normally run between 20% to 30%, but can be higher. Fly ash reacts as a pozzolan with the lime in cement as it hydrates, creating more of the durable binder that holds concrete together. Fly ash generated on burning coal can be used to manufacture bricks.
The process of recycling is always equated with cost reduction and with lessening if not eliminating the wastes that go to landfills. Polyester fibers from recycled bottles are now used to cut down on manufacturing costs for textiles. Naturally, this will also mean cheap clothes for consumers. Bottles of soft drinks can also be used for making fibers for carpeting etc.
5. d. Air pollution, **Explanation:** Acid rain is due to air pollution. Burning of fossils fuels release sulphur dioxide and nitrogen oxides that combine with water to form sulphuric acid and nitric acid during rain.
6. Ozone layer is a protective shield in stratosphere. Its depletion over a part of the atmosphere is called ozone hole which will result in an increased UV radiations

reaching the earth surface.

- Dobson units (D.U)

7. False

8. An electrostatic precipitator (ESP) is a filtration device that removes fine particles, like dust and smoke, from a flowing gas using the force of an induced electrostatic charge minimally impeding the flow of gases through the unit.

9.

a. Nutrients of the waste water causes extensive growth of planktonic or free floating algae (algal bloom)

b. Algae use oxygen, biochemical oxygen demand goes high, high fish mortality, deterioration of water quality.

c. Eutrophication.

10. Biochemical oxygen demand (BOD, also called biological oxygen demand) is the amount of dissolved oxygen needed (i.e., demanded) by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period. Greater the BOD more is its polluting potential.

When BOD levels are high, dissolved oxygen (DO) levels decrease because the oxygen that is available in the water is being consumed by the bacteria. Since less dissolved oxygen is available in the water, fish and other aquatic organisms may not survive.

11. **Defunct ship and e-wastes.** Old defunct ships are broken down in developing countries like India, Pakistan, and Bangladesh because of easy and cheap labour and demand for scrap material/ metal. These ships possess a number of toxic materials like asbestos, lead, mercury, tributyltin and polychlorinated biphenyls. The labour engaged in ship breaking are exposed to these toxic materials. The coastal areas where ship breaking is undertaken also become polluted.

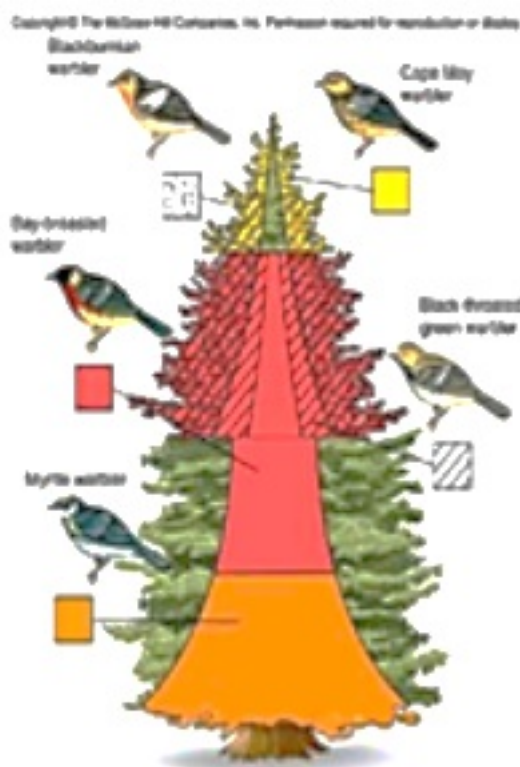
E-wastes are the irreparable computers and other electronic goods which are imported to developing countries for the extraction of metals through recycling.

12. Women and tribal communities have played a significant role in protection and conservation of forests. Amrita Devi Bishnoi Wild Life Protection Award, has instituted by Govt. of India for individuals and rural communities for their contribution in protection of wild life.

In 1731, a woman Amrita Devi showed exemplary courage by hugging a tree to prevent its cutting. Her three daughters and hundreds of other Bishnoi followed her. They were killed by soldiers of king of Jodhpur.

Chipko movement of Garhwal was started by local women to prevent cutting of trees.

13. i. Richa shows brilliance and cheerfulness through her Problem-solving ability. She has a helping attitude.
ii. Resource Partitioning
iii.



Similar Species Compete for Limiting Resources

Complete competitors Cannot Coexist

Dividing the Resources: Species can divide up a limiting resource, such as food, water, or habitat by using different slices or even using the same "slice" but at different times.

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14. Decline in the thickness of ozone layer over a restricted area is called ozone hole. It was first discovered over Antarctica. Antarctica air is completely isolated from the rest of the world by natural circulation of wind called as Polar vortex. CFCs released in the atmosphere slowly enters the stratosphere and the wind push them towards the poles. Environmental conditions prevailing in Antarctica during winter months are conducive for the formation of ozone hole. During winter months, lack of sunlight and low temperature facilitates the formation of ice clouds, which provide the catalytic surface for the reaction of chlorine.

Effect of Ultraviolet rays:-

UVB radiations are very harmful. Cornea of eye absorbs these radiations and becomes inflamed. This disorder is known as 'snow blindness' cataract and leads to diminishing of eye sight.

UV-B radiations damage skin cells and cause skin cancer.

15. The increases in the atmospheric temperature of the earth due to the increase in the concentration of green house gases (CO_2 , CH_4 , CFC) is called Global warming .

Causes:

- (i) Burning of fossil in automobiles and industries.
- (ii) Deforestation

Effects:

- (i) Due to the rise in temperature the polar ice caps will melt resulting in the rise of sea water level.
- (ii) Global warming will lead to explosive growth of weeds, increased incidence of plant diseases and pests. All these factors will decrease crop production in tropical and subtropical regions.
- (iii) Effect on weather and climate leading to chances of cyclones and flood.

Control measures:

- (i) Deforestation should be reduced.
- (ii) Plantation of trees.
- (iii) Limiting use of fossil fuels by developing and using alternate sources of energy.
- (iv) Reduction in human population.