

L15-Environment Management

Keywords

| | | | | |
|-------------|-------------------------------------|-----------------|------------------|---------------|
| Agriculture | Overgrazing | Fertility | Medicinal plants | Sewage |
| Alarming | Chemical fertilizers and pesticides | Defecating | Oxygen banks | Eco friendly |
| Floods | Overploughing | Famines | Land slides | Ecology |
| Drought | Overcropping | Slum conditions | Extinct | Biodegradable |
| Degradation | Soil erosion | Decaying | Acid rain | |
| Decompose | Glaciers | Deforestation | Ozone layer | |

In-text Questions

In-text Questions 15.1

1. Select (✓) the right answer.
 - i. Environment consists of
 - a. air that living things breathe
 - b. water, land and living things
 - c. all living and non-living things ✓
 - d. water, land and non-living things
 - ii. Environmental degradation refers to unfavorable change of
 - a. human interactions
 - b. water pollution

c. land degradation

d. surroundings ✓

2. Match the following items in Column A with the corresponding items in column B

| Column A | Column B |
|---------------------------|----------------------|
| a. Over crowdedness | i. fuels |
| b. Automobiles | ii. vehicles |
| c. Radio-active pollution | iii. chemical wastes |
| d. Aeroplanes | iv. slum conditions |
| e. Industries | v. air |
| f. Construction | vi. Smoke |
| | vii. nuclear weapons |
| | viii. deforestation |

a – iv

b –vi

c – vii

d – i

e – iii

f - viii

In-text Questions 15.2

a) Fill in the blanks:

- i. Poor agricultural practices lead to soil erosion and decreases the soil fertility.

- ii. Earthquakes and volcanoes give rise to harmful dust, smoke, heat and other harmful gases.
- iii. Overgrazing by cattle leads to hardening of soil and ultimately to 0 erosion.
- iv. Poor personal habits like spitting and defecating in open can result in land degradation whereas habits like smoking lead to air degradation.
- v. Floods, famine and strong winds are called natural disasters.

In-text Questions 15.3

1. Complete the sentences of column A with the help of column B

| Column A | Column B |
|-------------------------|-------------------------------------|
| a. Trees | i. global warming |
| b. Chemical fertilizers | ii. change in temperatures. |
| c. Deforestation | iii. deplete soil fertility |
| d. Refrigeration gases | iv. lead to land slides and floods. |
| | v. prevent soil erosion |

a – v

b – iii

c – iv

d – i

2. Choose the right answer and fill in the blanks:

- a. Acid rain (ozone layer / ✓ acid rain / heat of sun) is responsible for destruction of life and erosion of buildings.
- b. Depletion of ozone layer can lead to skin cancer (✓ skin cancer /

- anaemia/respiratory disease) and problems of eyes (bones/liver/✓ eyes)
- c. Global warming has resulted in increase in temperature (winds/ ✓ temperature / rain fall)
 - d. Degradation of air is mainly responsible for diseases of respiratory (✓ respiratory, circulatory, digestive) system like asthma and bronchitis (jaundice / ✓ asthma / cholera / ✓ bronchitis)
 - e. Effect of nuclear explosions can be seen in handicapped (normal weight / ✓ handicapped/happy) children born to mothers exposed to radiations after many years.
 - f. Two diseases which occur due to improper sewage disposal in the water are jaundice and typhoid (✓ jaundice, tuberculosis, malaria, ✓ typhoid)
 - g. Two diseases which occur due to chemical wastes of industries are leukemia and allergy (✓ leukemia, (✓ allergy, malaria, asthma).

In-text Questions 15.4

1. Choose the most appropriate answer:
 - i. Eco-friendly products mean things which are:
 - a. very harmful to the environment
 - b. less harmful to the environment
 - c. not harmful to the environment
 - d. not very harmful to the environment
 - ii. Eco-friendly products are given
 - a. FPO mark
 - b. AGMARK
 - c. ISI mark
 - d. ECO mark

iii. Products are termed eco-friendly on the basis of their

- a. production, use and disposal
- b. disposal, recycling and dumping
- c. production, distributing and recycling
- d. use, disposal and distributing

2. Given below are some eco-friendly non eco-friendly products. Categorise them under their appropriate headings:

| Eco-friendly Products | Non Eco-friendly Products |
|--|--|
| <ul style="list-style-type: none"> i. Water based paints ii. Solar cooker iii. Jute iv. Earthen cups v. Paper bag vi. Canvas vii. Unleaded petrol | <ul style="list-style-type: none"> i. Polythene bag ii. Nylon sari iii. Crude motor oil |

3. Match list A with list B and follow the pattern given in the example below.

| List A | List B |
|---|---|
| <ul style="list-style-type: none"> a. defecating in open b. recycling for industrial use household wastes c. industrial gases d. industrial wastes e. municipal wastes | <ul style="list-style-type: none"> i. pollutants separated before letting out ii. recycling for industrial use iii. Sulabh Shauchalaya iv. manure for garden v. sewage treatment plants vi. land treatment plants |

- a. Defecating in open – iii. Sulabh Shauchalaya
- b. Household wastes – iv. manure for garden
- c. Industrial gases – ii. recycling for industrial use
- d. Industrial wastes - i. pollutants separated before letting out
- e. municipal wastes – v. Sewage treatment plants

In-text Questions 15.5

1. Correct the following statements and give reasons.

- i. It does not matter if people have large families. **FALSE**

Because: It leads to population growth. This in turn, leads to excessive demands on our environment in terms of food, fuels and space.

- More people means more demand for employment. As a result, more industries, dams, roads and railway tracks are being constructed.
- This has led to industrialization and urbanisation, growth of slums, reduced forest cover and unhygienic living conditions.
- All these are affecting our environment leading to its degradation.

- ii. All members of society should not be involved in environmental management programmes. **FALSE**

Because: Every member of the society should take the responsibility of saving the environment for larger good. Only when all rich, poor, old, young, female, male etc take part in environmental management programmes, we can all help to save our Earth, and in turn save ourselves.

- iii. Household waste disposal is not important because final disposal of garbage will be done properly. **FALSE**

Because: Actually, all the households should become zero-waste generating houses.

- Wet-waste must be composted.
- Dry-waste must be segregated and given to respective recyclers.
- Sanitary waste must be burnt in safe incinerators
- Medical waste must be given to nearby hospitals which must burn them in safe incinerators.

iv. Waste lands cannot be cultivated for agriculture. **FALSE**

Because: Using certain techniques, wastelands can be made fertile and used for agriculture.

v. Healthy farming practices include overcropping and use of chemical fertilizers. **FALSE**

Because: Healthy farm practices include mixed cropping and use of natural manures.

2. Rearrange the letters to indicate the correct terms for the following

- | | | | |
|------|---------------------------------------|--------------|----------------------|
| i. | Avoid cutting trees | NTOSIFEARTED | DEFORESTATION |
| ii. | Pollutes the air | ISGOMKN | SMOKING |
| iii. | Melting of glass and metal for re-use | GCEIRCYLN | RECYCLING |
| iv. | Eco friendly fuel for cooking | SGAOIB | BIOGAS |
| v. | Recycling of household waste | EAMUNR | MANURE |

Terminal Questions

1. Define environmental degradation with two suitable examples from your day-to-day life.

Answer: **Environmental degradation** refers to an unfavourable change of our surroundings.

Degradation of Land, Water and Air is Environmental Degradation.

Two examples are:

- i. When we use plastic/polythene bags and throw them away, the soil becomes toxic and unfit to grow any plants.
 - ii. When we throw kitchen waste instead of composting it, it stinks and causes air pollution.
2. What do you understand by the term 'eco-friendly'? List four examples each of eco-friendly products and eco-friendly practices.

Answer: The products and practices which do not degrade the environment are called '**eco friendly**'. Another term used for eco-friendly is bio-friendly.

| Eco-friendly products | Eco-friendly practices |
|--|---|
| <ol style="list-style-type: none"> i. unleaded petrol ii. double refined motor oil iii. water based paints iv. jute and cotton | <ol style="list-style-type: none"> a. Composting kitchen waste b. Segregating and recycling dry waste c. Planting trees d. Using cotton and jute bags |

3. Explain how forests help in conserving the environment. Analyse the effects of deforestation.

Answer: Forests help in conserving the environment by:

- Making topsoil fertile by turning dead leaves and animals into manure.

- Holding fertile top soil from getting washed away, using roots
- Providing oxygen to us
- Influencing the weather conditions. They cause rainfall, maintain temperature and control wind and humidity.
- Recharging our natural sources of water like springs, lakes and rivers.

Effects of deforestation are:

- It leads to landslides, floods, and soil erosion.
- This leads to raising the level of the sea beds, and the land available to us is reduced.
- There is no rainfall, which affects the climate and ultimately leads to drying of springs, lakes and rivers.

4. How does technical advancement lead to environmental degradation?

Answer: The technical advancement leads to environmental degradation in the following way:

- Industries that make cars, computers, mobile phones etc release harmful chemicals into the environment while production.
- When we use these products, ie car, washing machine, refrigerator etc, they release harmful exhausts into the environment.
- The packaging used for every technical product we purchase, if not recycled, causes environmental pollution.
- When old things like tube lights, mobile phones, computers are not recycled they cause damage to water, air and soil.
- Noise pollution has also increased due to various gadgets.

5. Briefly explain the effects of overpopulation on our environment.

Answer: You are aware that our country's population is increasing every day. This leads to:

- Excessive demands on our environment in terms of food, fuels and space.
- More demand for employment.
- As a result, more industries, dams, roads and railway tracks are being constructed.
- This has led to industrialization and urbanisation, growth of slums, reduced forest cover and unhygienic living conditions.

6. Discuss the following effects of air degradation.

- a. acid rain
- b. global warming
- c. depletion of ozone layer

Answer:

| Si No. | Aspect | Effect |
|--------|-----------|---|
| a. | acid rain | <ul style="list-style-type: none"> • Smoke from vehicles and industries gives rise to harmful gases like sulphur dioxide and oxides of nitrogen. • They react with water vapour in the clouds to form dilute acids and come down as acid rain. • This acid rain is very dangerous and affects all kinds of plants, fishes and animals. • It even affects the buildings and monuments. • Erosion and discolouration of the white marble used in the construction of the Taj Mahal is one such example. |

| Si No. | Aspect | Effect |
|--------|--------------------------|--|
| b. | global warming | <ul style="list-style-type: none"> Usually, the earth's atmosphere keeps the required amount of heat from the sun and reflects back the excess heat into the space. Thus, all life on Earth lives at comfortable temperatures. But, these days, because of human activities like deforestation, forest fires, burning of fuels, etc., tons of gases like CO₂, methane, etc., are released in the atmosphere. These harmful gases retain the sun's heat causing the temperatures of Earth to increase. This is called Global Warming. |
| c. | depletion of ozone layer | <ul style="list-style-type: none"> Ozone layer protects the earth from overexposure to the harmful ultraviolet rays of the sun. This ozone layer gets destroyed by harmful gases used in refrigerators and fire extinguishers. Overexposure to ultraviolet rays can cause skin cancer and eye problems like cataract and blindness. It also results in stunted growth of plants. |

7. Present your plan to conserve your environment.

Answer: My plan to conserve our environment is - Reduce, Reuse and Recycle:

- Compost the wet waste
- Segregate and recycle the dry waste

- Reuse goods as far as possible
- Use renewable sources of energy etc

8. Compare the living conditions of a person living in a city with that of a person living in a village.

Answer: The living conditions of a person living in a city and a person living in a village:

| Person living in a city | Person living in a village |
|---|---|
| <ul style="list-style-type: none"> • Travels longer distances for work • Breathes air polluted by vehicle exhausts • Gets uninterrupted power supply • Usually does not have space to grow anything | <ul style="list-style-type: none"> • Travels lesser distances for work • Breathes relatively fresh air • Keeps facing power outage • Usually has space to grow own vegetables etc |

Previous Year Questions

1. “Improper habits of people lead to environment degradation.” Support this statement with the help of *six* examples. 6

Answer: Improper habits of people lead to environment degradation:

- Spitting in public, defecating in the open, bathing and washing clothes near water sources, etc, has lead to the degradation of land and water.
- Smoking and playing loud music have led to air degradation.
- Improper garbage disposal leads to wastage of resources which can be recycled and composted.
- Improper sewage disposal leads to diseases.
- Improper use of vehicles leads to air pollution.

vi. Improper use of rain water leads to water shortage.

2. Explain any *six* environmental hazards faced by slum dwellers. 6

Answer: The *six* environmental hazards faced by slum dwellers are:

- i. Diseases like Jaundice, Cholera, Malaria etc due to poor sanitation and potable water conditions.
- ii. Contagious diseases like plague due to over crowding.
- iii. Deafness, blood pressure, anxiety etc due to high noise levels.
- iv. Air pollution due to foul smell emanating from garbage piles, open and choked drains, open defecation and poor personal hygiene habits.
- v. Heavy use of solid fuels such as charcoal and wood lead to air pollution and respiratory diseases.
- vi. Soil pollution due to improper garbage disposal and cramped living.

3. Suggest four ways by which we can contribute in improving our environment. [2]

Answer: The four ways by which we can contribute in improving our environment are:

- i. Composting wet waste
- ii. Segregating and recycling dry waste
- iii. Reuse goods as far as possible
- iv. Use renewable sources of energy etc

4. Guide the slum dwellers to change their four personal habits to prevent environmental degradation. [4]

Answer: The four personal habits that slum dwellers should change to prevent environmental degradation are:

- i. Stop defecating in open and use Sulabh Sauchalaya's instead.
 - ii. Reduce noise levels by playing their gadgets at low volume.
 - iii. Form into cooperative groups and do waste management. By doing proper composting of wet waste, they can sell manure and earn.
 - iv. Use cooking fuels which generate less smoke.
5. Illustrate how industries are a major cause of environmental degradation. 6

Answer: Industries are a major cause of environmental degradation because they cause harm to environment at all the stages – Production, Packaging, Transportation and Customer Use:

- Production: industries generate toxic chemical wastes, harmful gases and radioactive pollutants during their manufacturing process.
- Packaging: The packaging and leftovers of a product are usually non-biodegradable. For example, thermocol and plastic
- Use: During use of many products harmful gases and radiation occurs. For example, refrigerators and cell phones.
- Transportation: Transportation of manufactured goods to various destinations use lots of fossil fuels like petrol and diesel and emit exhausts.