

Appendix-I (A)

Session: 1 & 2

Hours: 2hrs.

Topic: Air Pollution Act.

Objectives:

- 1) Students will be able to define air pollution.
- 2) Students will be able to identify the causes of air pollution.
- 3) Students will be able to understand the preventive measures of air pollution.

Methodology: Group discussion method.

Approach: Co-operative learning.

Teaching Learning Material: Task sheet for air pollution.

Activity: - Jigsaw Technique.

Content Points: 1) Definition of air pollution.

2) Causes of air pollution.

3) Preventive measures to control air pollution.

4) Air pollution act.

Procedure:

- The researcher gave overview of the topic.
- After that the researcher divided the class into 5-6 groups each having 6 students.
- Then the researcher provided a task to the students.
- Each group had discussed among themselves and then made the presentation.

Outcome:

The students were able to brainstorm about the air pollution which helped to create awareness among the students.

Appendix-I (B)

Session- 3 & 4

Hours: 2hrs

Topic: Noise pollution

Objectives:

- 1) Students will be able to acquire knowledge about the noise pollution.
- 2) Students will be able identify the causes of noise pollution.
- 3) Students will be able to acquire knowledge about the preventive measures of noise pollution.

Methodology: Group discussion method.

Approach: Participatory Approach.

Teaching learning materials: Charts.

Activity: Poster making

Content Points: 1) Definition of noise pollution.

2) Causes of noise pollution.

3) Preventive measures to control noise pollution.

4) Noise pollution act.

Procedure:

- The researcher gave overview of the topic.
- After that the researcher divided the class into 5-6 groups each having 6 students.
- Then the researcher provided a task to the students.
- Each group had discussed among themselves and then made a poster.

Outcome:

The students were able to the problems and identify the ways to prevent noise pollution.

Appendix-I (C)

Session: 5 & 6

Hours: 2hrs

Topic: Environment Protection Act.

Objectives:

- 1) Students will be able to identify the causes of environment pollution.
- 2) Students will be able to understand the preventive measures of environment pollution.

Methodology: Group discussion method.

Approach: Constructivist approach.

Teaching Learning Material: Task sheet for Environment protection.

Activity: Preparation of consequence chart.

Content Points: 1) Definition of environment pollution.

2) Causes of environment pollution.

3) Preventive measures to control environment pollution.

4) Environment protection act.

Procedure:

- The researcher gave overview of the topic.
- After that the researcher divided the class into 5-6 groups each having 6 students.
- Then the researcher provided a task to the students.
- Each group had discussed among themselves and then made the presentation.

Outcome:

The activity helped the students to understand the consequences of environment pollution and their impact on the environment.

Appendix-I (D)

Session: 7 & 8

Hours: 2hrs

Topic: Wild life protection act.

Objectives:

- 1) Students will be able define wild life conservation.
- 2) Students will be able to identify the importance of wild life conservation.
- 3) Students will be able to understand about major threats to wildlife.

Methodology: Group discussion method.

Approach: Participatory approach.

Teaching Learning Material: Task strips for wildlife protection.

Activity: Preparing Anecdotes.

Content Points: 1) Definition of wild life conservation.

2) Major threats to wildlife.

3) Preventive measures to control the destruction of wildlife.

4) Wild life protection act.

Procedure:

- The researcher gave overview of the topic.
- After that the researcher divided the class into 5-6 groups each having 6 students.
- Then the researcher provided strips of various situations to the students.
- Each group had discussed among themselves and prepared anecdotes on the topic.

Outcome:

The activity raised awareness of ways in which human activity contribute to the loss of habitat of wildlife and also helped students to understand how people can help to protect wildlife.

Appendix-I (E)

Session: 9 & 10

Hours: 2hrs

Topic: Water pollution act.

Objectives:

- 1) Students will be able to define water pollution.
- 2) Students will be able to identify the causes of water pollution.
- 3) Students will be able to understand the preventive measures of water pollution.

Methodology: Survey method.

Approach: Participatory approach.

Teaching Learning Material: Task sheet for water pollution.

Activity: - Survey

Content Points: 1) Definition of water pollution.

2) Causes of water pollution.

3) Preventive measures to control water pollution.

4) Water pollution act.

Procedure:

- The researcher gave overview of the topic.
- After that the whole class was taken to the municipality where the students interacted with staff and collected data about water pollution.
- Then students completed the task sheet given by the researcher.

Outcome:

The activity and lesson raised awareness of ways in which human activity contribute to the causes of water pollution.

Pre test

Name: _____

Roll No: _____

Subject: _____

Date: _____

College: _____

Instructions: 1. Read the questions carefully and tick appropriate answers.

2. All the questions carry equal marks.

Total marks: 25

1. What is the main factor for destruction of forest?

- a) Flood
- b) Drought
- c) Earthquake
- d) Urbanization

2. Pollution can bring about changes in

- a) Biogeochemical cycling
- b) Abiotic environment
- c) Biotic environment
- d) None of the above

3. What is the consequence of destruction of forest?

- a) Flood
- b) Drought
- c) Earthquake
- d) Urbanization

4. Acid rain occur when atmosphere is heavily polluted with

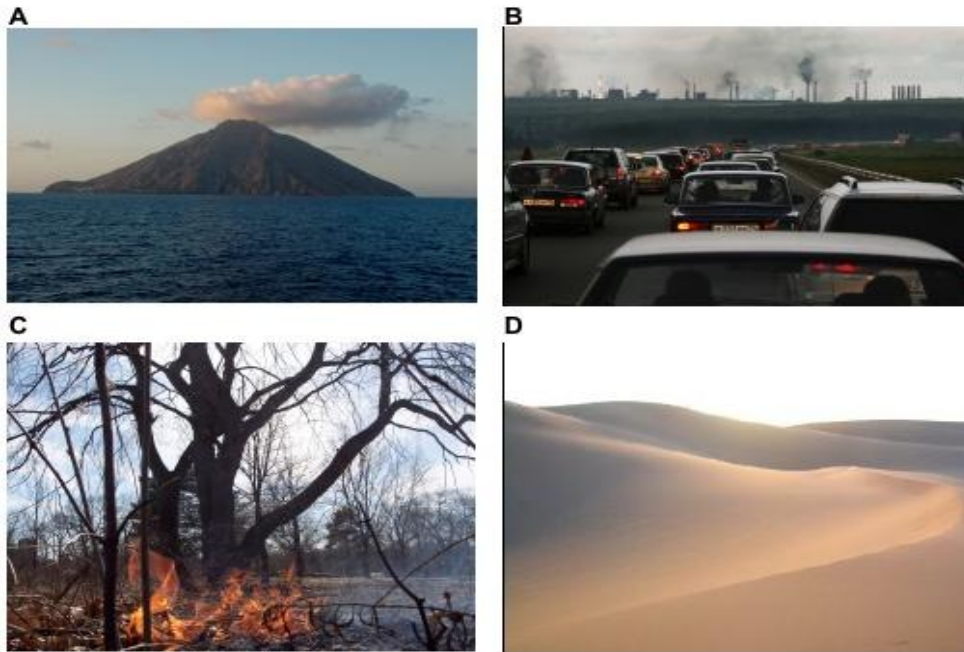
- a) CO & CO₂
- b) Smoke particles
- c) Ozone
- d) SO₂ & NO₂

5. Spraying of DDT on crops causes pollution of

- a) Soil & Water

- b) Air & Soil
- c) Crops & Air
- d) Air & Water

6. Which one of the following is not an example of a natural cause of air pollution?



7. Earth day is observed on

- a) February 16
- b) April 4
- c) April 22
- d) September 17

8. World Environment day is observed on

- a) January 31
- b) June 5
- c) August 25
- d) October 31

9. The biggest threat to wildlife is

- a) A variety of predators
- b) Legal Hunting

- c) Loss of habitat
 - d) Air pollution
10. What happens when we allow industrial effluents to flow in to rivers...?
- a) The natural colors of water will improve
 - b) The oxygen content of river water will decrease
 - c) Fishes will increase in number
 - d) The soil in the banks will become more fertile
11. Among the condition which one is appropriate for the healthy environment?
- a) Always using automobiles
 - b) Smoking in public places
 - c) Throwing wastes at proper places
 - d) Cutting all the plants
12. Water.....Water.....Everywhere but
- a) 97% of earth water is salt water & 0.9% is accessible fresh water
 - b) 90% of earth water is salt water & 0.94% is accessible fresh water
 - c) 90% of earth water is salt water & 4% of water is accessible fresh water
 - d) 97.14% of earth water is salt water & 2.59% of water is accessible fresh water
13. What is the effect of contaminated food and water?
- a) It increases the immune system in our body
 - b) The infectious agents remain alive in our body and cause diseases
 - c) It causes disruption of food chains
 - d) All of the above
14. Air pollution is severe in
- a) Cities
 - b) Industries
 - c) Densely populated area
 - d) All of the above
15. The true statement about 'green house effect' is that it is
- a) Caused by combination of many gases
 - b) Caused by CO₂
 - c) Caused only by CO₂,CFC,CH₄ and NO₂ gases
 - d) None of the these

16. Excess fluoride in drinking water is likely to cause:

- a) Blue baby syndrome
- b) Fluorosis
- c) Change in the taste & odour
- d) Intestinal irritation

17. The most important human activity, leading to the extinction of wildlife is..

- a) Pollution of wildlife
- b) Hunting for valuable wildlife products
- c) Introduction of alien species
- d) Alteration and destruction of the natural habits

18. What statement is true about pollution?

- a) Pollution is any environmental change that adversely affects living things
- b) Pollution is the third main cause of extinction
- c) Population can lead to diseases
- d) All of these are true about pollution

19. Which of the following wastes cannot be decomposed by bacteria to form compost?

- a) Kitchen wastes
- b) Plastic and polythene bags
- c) Dead plants
- d) Bodies of insects living in the soil

20. Minamata disease was caused by pollution of water by

- a) Lead
- b) Mercury
- c) Tin
- d) Methyl isocyanate

21. The ambient quality of the environment refers to

- a) The environment in its natural state i.e. before the invention of humankind
- b) The exposure of the environment to global warming
- c) The environment after the impact of some pollutants

d) The need for conservation of scarce natural resources

22. Natural sources of air pollution comes from

- a) Internal combustion engines
- b) Coal fired electrical plants
- c) Salt from sea spray, cattle, soil dust
- d) Birds

23. You have been hired by a rapidly growing small city to improve the air quality, which has deteriorated in the past 10 years. Your first suggestion is to _____.

- a) Decrease the amount of CFCs used locally
- b) Move or close the cattle feed lots near the river
- c) Improve transportation options, including carpool lanes, buses, and light rail
- d) Remove the hydroelectric dam on the river

24. The most serious environmental effect posed by hazardous wastes is

- a) Air pollution.
- b) Contamination of groundwater.
- c) Increased use of land for landfills.
- d) Destruction of habitat.

25. India celebrates van mahotsav every year in the month of _____ in which lakh of trees are planted across the country.

- a) June
- b) July
- c) August
- d) September

Post test

Name _____

Roll No _____

College _____

Instructions: 1. Read the questions carefully and tick appropriate answers.

2. All the questions carry equal marks.

Total marks: 25

1. Minamata disease was caused by pollution of water by
 - a) Mercury
 - b) Cadmium
 - c) Cobalt
 - d) Fertilizers
2. The pollution which does not persistent harm to life supporting system is
 - a) Noise pollution
 - b) Radiation pollution
 - c) Organochlorine pollution
 - d) All of these
3. What are the different ways in which water gets contaminated?
 - a) Various industrial unit dispose the chemicals, these chemicals contaminate water
 - b) Water gets contaminated when sewage is disposed off in rivers
 - c) Water gets contaminated by harmful insecticides and pesticides
 - d) All of the above
4. Recently number of states and municipalities has passed laws banning the use of the following due to its adverse environmental effects
 - a) Polythene bags
 - b) Paper bags
 - c) Cloth bags
 - d) All of these
5. Water pollution has become a major problem in the world today. It has an adverse affect on both the environment and health. What are the main sources of water pollution in India?

- a) Municipal sewage
 - b) Bathing
 - c) Industrial discharge
 - d) Both a and c
6. Most waste generated in the house can be recycled, but there are certain items that cannot be recycled. In the list given below, which item is not recyclable?
- a) Newspaper
 - b) Plastic bags
 - c) Old medicines
 - d) Glass bottles
7. Cutting down forests leads to erosion of top soil, which in turn leads to
- a) Urbanization
 - b) Desertification
 - c) Sea level rise
 - d) Earthquakes
8. Use of excessive fertilizer in fields leads to the deficiency of _____ in the nearby water body.
- a) Carbon dioxide
 - b) Carbon monoxide
 - c) Nitrogen
 - d) Oxygen
9. Which of these acts is not considered to be polluting?
- a) Burning fossil fuels
 - b) Using solar power
 - c) Burying trash in a landfill
 - d) Using natural gas
10. When you go for shopping, what are you expected to do to save environment?
- a) Shop for products that have as little packaging as possible.
 - b) In any store, use a bag even it is not needed.
 - c) Do not reduce the frequency of shopping.
 - d) Buy paper towels and napkin.

11. World Environment day is observed on

- a) January 30
- b) April 21
- c) June 5
- d) December 25

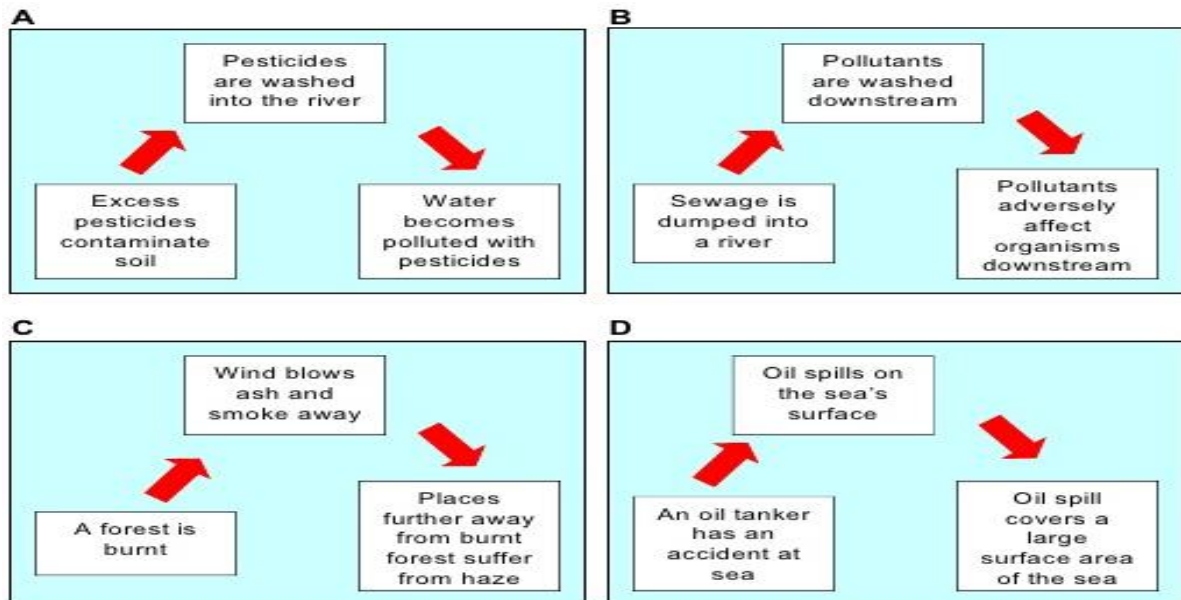
12. In water bodies subjected to sewage pollution, fish die because of the:

- a) Reduction in dissolved oxygen caused by microbial activity
- b) Pathogens released by the sewage
- c) Foul smell
- d) Clogging of their gills by solid substances

13. The environment which has been modified by human activities is called

- a) Natural environment
- b) Anthropogenic environment
- c) Urban environment
- d) Modern environment

14. Which one of the following diagram shows how one type of pollution leads to another type of pollution?



15. A landowner who is concerned about his environment wishes to practice sustainable development. If he cuts 400 trees from his land this year he should.....
- a) Plant 200 trees
 - b) Plant 400 trees
 - c) Build a road through that land
 - d) Build a lake in that location
16. The full form of W.W.F is
- a) World wide fund
 - b) World wildlife fund
 - c) World works fund
 - d) World women fund
17. In our country the Van Mahotsav Day is observed on
- a) Second of June
 - b) First of July
 - c) Tenth of August
 - d) Eighth of September
18. Which of the following are biodegradable waste products?
- a) Rubber, plastic, manure
 - b) Metal, glass, plastic
 - c) Vegetable peels, garden refuse, paper
 - d) Glass, wood cuttings, batteries
19. Typhoid, cholera and dysentery are diseases that are spread by:
- a) Air pollution
 - b) Water pollution
 - c) Land/soil pollution
 - d) The use of pesticides
20. Which of the following statement is not correct about the forest?
- a) Forest reduce soil erosion
 - b) Provides recreational opportunities
 - c) Provides economic development
 - d) None of the above

21. Which of the following is the example of municipal and industrial discharge pipes?

- a) Non point source of pollution
- b) Point source of pollution
- c) Violation of the clean water act
- d) Irrigation

22. Taj Mahal is said to be suffering from "Marble Cancer". What is Marble Cancer?

- a) Acidic Rain which corrodes marble.
- b) Large number of Fungus in Taj Mahal marbles
- c) Yellowing of the marble on account of Soot particles
- d) Smokes filling the Taj Mahal from adjoining industries.

23. Which gas is primarily responsible for Green House Effect i.e. global warming?

- a) Hydrogen Dioxide
- b) Carbon Dioxide
- c) CFC
- d) Sulphur dioxide

24. 71% of earth surface is covered with...

- a) Air
- b) Land
- c) Water
- d) Coal

25. The extinction of wildlife is caused due to which of the following human activity

- a) Pollution of wildlife
- b) Hunting for valuable wildlife products
- c) Introduction of alien species
- d) Alternation and destruction of the natural habits.

Reaction Scale

Name: _____

Roll No: _____

S. No		Not at all	Rarely	Sometimes	Most of the times	Always
1.	During the session I was able to understand the concepts related to environmental education.					
2.	I enjoyed all the activities given by the instructor.					
3.	All the sessions increased my interest in the subjects.					
4.	The sessions helped to foster awareness about environment pollution.					
5.	The illustration given during the session enabled me to understand about different types of pollution.					
6.	I don't think that activities given by the instructor was not relevant.					
7.	The activities given by the instructor were appropriate and the instruction given was clear.					
8.	All the activities given by the instructor helped me to develop skills and inculcate values to create awareness among others.					
9.	The instructor encouraged me to share my knowledge about course content.					
10.	I was motivated to learn the course material.					

Scores of Pre-Test

Student's roll no	Pre test scores	Post test scores
1	14	21
2	21	24
3	18	23
4	18	18
5	12	22
6	19	20
7	20	22
8	15	18
9	21	23
10	17	22
11	15	20
12	12	12
13	17	20
14	20	22
15	17	20
16	16	20
17	15	20
18	14	16
19	16	22
20	14	20
21	14	16
22	11	18
23	13	16
24	17	22
25	17	21
26	19	23
27	20	23
28	16	22
29	16	23
30	16	19
31	15	16
32	16	20
33	13	21
34	15	17

35	14	15
36	11	17
37	18	21
38	16	23
39	16	21
40	15	19

Appendix- VI (A)



Appendix-VI (B)



Appendix-VI (C)



Appendix-VI (D)

