

Pre Evaluation Environmental Challenge 2005

Directions For Numbers 1-25 : Read each of the following multiple-choice items and the possible answers carefully. Mark the letter of the correct answer on your answer sheet or as instructed by your teacher. **Remember: Make no marks on this test.**

1

Water quality is essential for good health. What is the percentage of fresh water on the earth that can be used for human consumption?

- A 1
- B 10
- C 25
- D 50

2

What is the difference between the atmospheric and ground level ozone layers?

- A The atmospheric ozone layer is protective while the ground level is damaging.
- B The ground level ozone layer is protective while the atmospheric level is damaging.
- C The atmospheric ozone layer is colorless and odorless while the ground level is not.
- D Man creates the atmospheric ozone layer while the ground level occurs naturally.

3

The Environmental Protection Agency (EPA) is **NOT** responsible for which action?

- A Protecting human health
- B Improving air and water quality
- C Homeland defense of waterways
- D Treating and controlling hazardous waste

4

Which control method would control the amount of pollution before it ever becomes a problem?

- A Prevention
- B Reduce
- C Reuse
- D Recycle

5

Environmental problems are both contributed to and solved by:

- A Research.
- B Inoculation.
- C Technology.
- D Test and analysis.

6

What federal government body is represented by the acronym OSHA?

- A Oklahoma State Housing Authority
- B Occupational Safety and Hazard Act
- C Occupational Safety and Health Administration
- D Oceanic Society and Habitat Association

7

What is the first step in the problem solving process?

- A Implementation of the solution
- B Identifying the problem
- C Brainstorming possible solutions
- D Analyzing the data

8

Eyeglass frames, computer equipment and wireless phones can be donated for redistribution in their current forms (not changed). Which of the control methods **MOST** applies in this case?

- A Prevention
- B Reduce
- C Reuse
- D Recycle

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For Numbers 9-11, consider the following scenario:

Students at Pacific Middle School determined that the creek behind their school needed to be cleaned by picking and disposing of litter. The problem was identified and the students brainstormed ways to take care of the problem. Permission was received from the administration of the school before pictures were taken of the creek bed and the students began to implement their plan. After two weeks, the students had collected trash, planted flowers and were satisfied with their work. Photos were again taken to show what they had accomplished. About three months later, the students were upset because the creek bed was again littered with trash. Again the students collected and disposed of the trash. It wasn't long before the students realized their solution of the problem was not permanent.

9 What logical conclusion have the students made?

- A Their solution also needs a prevention plan.
- B They need to give up to save themselves from embarrassment.
- C They need to ignore problems like this in the future.
- D Litter needs to be biodegradable.

10 Which step in the DEAL problem solving model did the students use when they determined that the creek needed to be cleaned up?

- A Define
- B Explore
- C Act
- D Look back

11 Comparing the pictures of the creek before it was cleaned up to what the creek looked like after is which step in the DEAL problem solving model?

- A Define
- B Explore
- C Act
- D Look back

12 Collecting aluminum cans, plastic bottles and newspapers to return them to be remanufactured is an example of which control method?

- A Prevention
- B Reduce
- C Reuse
- D Recycle

13 What has had the greatest negative affect on the environment?

- A Military conflict
- B Automobile invention
- C Industrial Revolution
- D Mankind

14 Who is given credit for bringing environmental issues to the attention of the American public?

- A Walt Whitman
- B Rachel Carson
- C James Branch Cabell
- D Jo Lynn Busby

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15 P², as it deals with environmental issues, refers to:

- A Pacific Pollution.
- B Political Power.
- C Public Protection.
- D Pollution Prevention.

16 Given the option of purchasing fluorescent or incandescent house bulbs, what factor would be the same in both mathematical formulas for calculating cost efficiency?

- A Wattage
- B Life span
- C Cost per kilowatt hour
- D Cost

17 The Air Quality Index is a measure of ozone concentration in the air. What is the unit of measurement?

- A Parts per billion (ppb)
- B Parts per hundred (pph)
- C Parts per million (ppm)
- D Parts per thousand (ppt)

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Conditions	Air Quality Index	Color Code
Good	AQI: 0 - 50	Green
Moderate	AQI: 51 - 100	Yellow
Unhealthy For Sensitive Groups	AQI: 101 - 150	Orange
Unhealthy	AQI: 151 - 200	Red
Very Unhealthy	AQI: 201 - 300	Purple

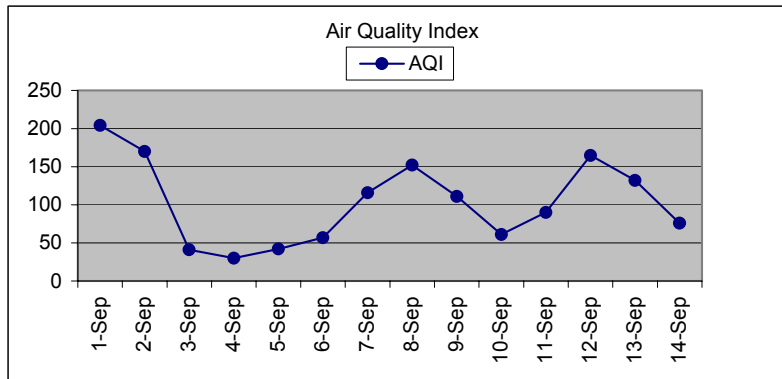


Fig.EC05.01

18 Using the air quality index charts in Fig.EC05.01, how many days had good air quality?

- A 2
- B 3
- C 4
- D 5

19 Using the air quality index charts in Fig.EC05.01, which day had the **MOST** unhealthy air quality?

- A 1-Sep
- B 4-Sep
- C 10-Sep
- D 12-Sep

20 Electricity is measured in kwh (kilowatt hours). How many watt hours does one kilowatt hour equal?

- A 1
- B 10
- C 100
- D 1000

21 Which presentation method is the **WORST** way to present gathered data?

- A Charts and graphs
- B Before and after photos
- C Videos of the solution implementation
- D Oral report

22 The use of glassware in kitchens as opposed to paper products is an example of which control method?

- A Prevention
- B Reduce
- C Reuse
- D Recycle

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23

Ozone has an additional atom that makes it particularly reactive. What is the chemical notation for ozone?

- A O
- B O₂
- C O₃
- D O₄

24

The creation and use of the pesticide DDT is **NOT** linked to:

- A The extinction of the Ivory-billed woodpecker.
- B The near extinction of the Bald Eagle.
- C Increased herbicide resistance.
- D Increased growth in the Pine Bark Beetle.

25

Negative Ozone (O₃) is produced when nitrogen oxide (NO₃) react with volatile organic compounds (VOC) and:

- A Sunlight..
- B Factory steam.
- C Automobile exhaust.
- D Plants.

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?	⊙	Answer/ Scale	Objective	?	⊙	Answer/ Scale	Objective
1	1	A	EC05.03 Technology	14	14	B	EC05.03 Technology
2	2	A	EC05.03 Technology	15	15	D	EC05.03 Technology
3	3	C	EC05.03 Technology	16	16	C	EC05.01 Math
4	4	A	EC05.03 Technology	17	17	C	EC05.01 Math
5	5	C	EC05.03 Technology	18	18	B	EC05.01 Math
6	6	C	EC05.03 Technology	19	19	A	EC05.01 Math
7	7	B	EC05.03 Technology	20	20	D	EC05.01 Math
8	8	C	EC05.03 Technology	21	21	D	EC05.02 Science
9	9	A	EC05.03 Technology	22	22	B	EC05.02 Science
10	10	A	EC05.03 Technology	23	23	C	EC05.02 Science
11	11	D	EC05.03 Technology	24	24	C	EC05.02 Science
12	12	C	EC05.03 Technology	25	25	A	EC05.02 Science
13	13	D	EC05.03 Technology				

Minimum points
required to achieve
mastery category

Total questions on test: 25

Objectives measured: 3	Items	Points	●	◐	Questions measuring this objective
EC05.03 Technology	15	15	11	10	1 2 3 4 5 6 7 8 9 10 11
EC05.03 Technology					12 13 14 15
EC05.01 Math	5	5	4	3	16 17 18 19 20
EC05.02 Science	5	5	4	3	21 22 23 24 25
Totals		25	19	16	

EC05

? = Test Question Number ⊙ = line on GP Form

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Items used in test

?	Item name	?	Item name	?	Item name
1	EC05.03.00.14	10	EC05.03.00.11	18	EC05.01.00.04
2	EC05.03.00.05	11	EC05.03.00.15	19	EC05.01.00.05
3	EC05.03.00.03	12	EC05.03.00.13	20	EC05.01.00.01
4	EC05.03.00.04	13	EC05.03.00.01	21	EC05.02.00.02
5	EC05.03.00.09	14	EC05.03.00.02	22	EC05.02.00.05
6	EC05.03.00.06	15	EC05.03.00.07	23	EC05.02.00.04
7	EC05.03.00.08	16	EC05.01.00.02	24	EC05.02.00.03
8	EC05.03.00.12	17	EC05.01.00.03	25	EC05.02.00.01
9	EC05.03.00.10				

EC05

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