

ENVIRONMENTAL AWARENESS

A MONTHLY PUBLICATION OF UP BETA SIGMA FRATERNITY, INTERNATIONAL, INC.

Test your Environmental Acuity

The following quiz was designed solely for personal enrichment and not meant to push for any moral imperative or to indict anyone for anything. The quiz format is to make it fun, at the same time eschewing the tedium of distilling formidable volumes of information into an exasperating discourse. Outsmarting the next guy by getting the answers right is not as important as getting the information to heart. The intention is not to proselytize but to highlight the prevailing wisdom, heighten awareness, and illuminate choices that confront us in our everyday lives.

Cheers!!! On with the party and recycle the plastics and cans!!!

"Wise men are instructed by reason; men of less understanding, by experience; the most ignorant, by necessity; the beasts, by nature."

Marcus Tullius Cicero

1. The term "greenhouse effect" comes from the observation that air inside a greenhouse is warmer than outside air. As applied to planet earth, the term refers to heating of the earth's surface due to greenhouse gases in the atmosphere that:

- a) enhances the ability of solar radiation to reach the earth's surface
- b) prevents heat on the earth's surface to escape back into space
- c) prevents cold air from space to reach the earth's surface
- d) react with each other to produce more heat

2. The earth enjoys a natural greenhouse effect that makes the planet hospitable to most forms of life. Without this natural greenhouse effect, the earth would:

- a) burn in excessive heat
- b) freeze
- c) enjoy better summers
- d) experience torrential rains

3. Increase in the concentration of greenhouse gases in the atmosphere has resulted in the enhancement of the greenhouse effect, the most familiar sign of which has been global warming. It is estimated that the average global temperature over the last century has increased by:

- a) 1.3 degree F
- b) 0.1 degree F
- c) 0.01 degree F
- d) 0.001 degree F

This Maiden Issue

Starting this January and every month thereafter, the UPBSFI, Inc. will be providing its members with useful information regarding our environment. A lot of the information found in this issue, as well as the succeeding ones, might be considered by many as basic and a matter of common sense. Unfortunately, common sense is not always translated into common practice.

It is the hope of this publication not only to make the reader become interested and knowledgeable in environmental issues, but also to derive practical benefits in being practitioners of environmental protection programs.

About the Author

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Gerry was a Professor at UP Los Banos before coming to the US on a Postdoctoral Fellowship at Stanford University Medical School, and then at the University of California, San Francisco.

4. Climate change, instead of global warming, is now the preferred term to describe the impact of increased greenhouse gas in the atmosphere because:
- a) warming is happening only in some parts of the globe
 - b) numerous other changes are taking place around the world, including melting mountain glaciers and polar ice, rising sea level, more intense weather events, erratic weather patterns, species extinction, and changes in the life cycles of many plants and animals
 - c) cooling is actually happening in other parts of the globe
 - d) all of the above
5. The most common greenhouse gases in the earth's atmosphere are water vapor, carbon dioxide, methane and nitrous oxide. While water vapor accounts for 60-70% of the planet's greenhouse effect, the other gases have more impact on climate change because:
- a) their concentrations are increased tremendously by human activity
 - b) they persist in the atmosphere for long periods of time
 - c) There is no feasible way to capture them from the atmosphere
 - d) all of the above
6. The potential of a greenhouse gas to contribute to climate change is not limited to its present concentration in the atmosphere. Other important factors that contribute to its potential are atmospheric longevity, ability to absorb heat, and projected increase in the atmosphere over time. Based on all known factors that influence the potential to contribute to climate change, which of the following greenhouse gases has the highest potential to contribute to climate change?
- a) carbon dioxide
 - b) methane
 - c) ozone
 - d) water vapor
7. According the US EPA data of 2005, combustion of fossil fuels (oil, coal, natural gas) for energy generation is responsible for most of the country's carbon dioxide emission into the atmosphere. Of the total energy consumed in 2005, how much of the total came from the combustion of oil?
- a) 10 %
 - b) 20 %
 - c) 30%
 - d) more than 40%
8. The transportation sector is the largest source of carbon dioxide emission in the US, producing over 30 percent of the nation's total in 2003. How much of this emission came from personal-use vehicles?
- a) 10%
 - b) 20%
 - c) 40%
 - d) 60%
9. According to the United Nations Framework Convention on Climate Change, in 2003 the US produced 23.4 tons of greenhouse gas per person. The level of greenhouse gas that the planet can cope with and sustain is:
- a) About 20 tons per person
 - b) About 15 tons per person;
 - c) About 7 tons per person;
 - d) About 3 tons per person.
10. Americans make up a little less than 5 percent of the world population. Annual carbon emissions in the U.S. represent what percentage of the world total?

- a) 7%
- b) 12%
- c) 17%
- d) 22%

11. In 2005, the residential sector accounted for 18% of all greenhouse gas emissions in the US. Which of the following uses the most electricity in the average U.S. home?

- a) water heater
- b) lights
- c) heating and air conditioning
- d) refrigerator

12. Methane is estimated to be 21 times more powerful than carbon dioxide in warming the atmosphere. Livestock and agriculture are major contributors of methane in the atmosphere. For each kilogram of meat produced, which of the following food animal is responsible for emitting the amount of carbon dioxide equivalent to that released by driving an average car for 160 miles, and leaving a 100-watt bulb on for 20 days?

- a) swine
- b) poultry
- c) beef cattle
- d) sheep

13. Water shortages have become a new reality that was recently highlighted by droughts in a few southern states. At about 500,000 gallons per person per year, Americans consume approximately:

- a) double the average in other developed nations
- b) less than the average in developed nations
- c) the same as the average in developed nations
- d) the same as the average in developing nations

14. According to data from the Union of Concerned Scientists, every American replacing one incandescent light bulb with a fluorescent bulb would be equivalent to taking 1 million cars off the road for:

- a) 1 day
- b) 1 week
- c) 1 month
- d) 1 year

15. The average sea level around the world has already risen 4 to 8 inches in the past 100 years due to climate change, and is expected to rise another 4 to 35 inches (with a best guess of around 19 inches) by 2100. This rise in sea level is due to:

- a) melting of glacial ice
- b) melting of polar ice
- c) expansion of water volume in oceans due to warming
- d) all of the above

Answers: 1(b); 2(b); 3(a); 4(d); 5(d); 6(a); 7(d); 8(d); 9(d); 10(d); 11(c); 12(c); 13(a); 14(d); 15(d)

How did you do?

You got 10-15 answers right: Al Gore would love to have you on his team!!!

5-9: Exceptionally astute; you deserve some bragging rights.

2-4: You're off to a good start; lots of room for improvement.

0-1: Taking this quiz alone signifies your good intentions. A good kick in the butt could be all that's necessary to overcome your inertia.

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