

“Check Your Gray Matter” CAPCO Website Quiz

(Note: Sources for images listed are usable except for italicized sources which appear not to have a copyright, but specific details were not specified on the website.)

Directions:

Answer the following multiple choice questions. Each question is worth 5 points. Some of the questions are pretty easy and can be found by searching CAPCO’s website, while others may require some of your own exploration. If you finish with the following number of points, you’re officially qualified as:

- 100-85 points: Atmospheric Ace...Amazing!!!**
85-70 points: Ozone Over-Achiever...Nice Work!!
65-50 points: Above Average with Aerosol...Good Effort!
45 points or less: Environmentally Under-Educated...Keep Learning!

Tell your friends to take the quiz and see how you compare...and remember, no matter what your score is, It’s O.K. to Spray!

1. Name the four layers of the Earth’s atmosphere in order from the lowest proximity to the Earth to the highest.
 - a. Thermosphere, Mesosphere, Stratosphere, Troposphere
 - b. Thermosphere, Hectosphere, Stratosphere, Macrosphere
 - c. Macrosphere, Stratosphere, Hectosphere, Thermosphere
 - d. Troposphere, Stratosphere, Mesosphere, Thermosphere



Image Courtesy of www.nasa.gov

2. Which level of the Earth’s atmosphere contains the protective ozone layers? (Hint: It is the same level of the atmosphere that planes often fly through because of its stability)
 - a. Stratosphere
 - b. Troposphere
 - c. Thermosphere
 - d. Mesosphere
3. What is the “hole in the ozone layer”?
 - a. The 150 sq. mile area in the atmosphere above Antarctica that contains absolutely no ozone
 - b. There is no actual “hole”. The term, inaccurately, refers to the lack of a substantial amount of ozone over Antarctica during certain months of the year. A “thinned layer” is a much more accurate description of the state of the upper ozone layer.

- c. The section of ozone that the space shuttle flies through when it exits the Earth's atmosphere
- d. The round area of the Thermosphere that allows greenhouse gases to escape from the Earth's surface

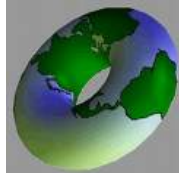


Image Courtesy of www.erights.org

- 4. What is the main benefit of the upper ozone layer to humans?
 - a. To filter the CFCs from reaching the Earth
 - b. To protect the Earth from asteroids and other flying debris in space
 - c. To filter ultraviolet (UV) radiation from the Sun
 - d. To trap gravity on the Earth's surface so we don't float away



Image Courtesy of www.occultopedia.com

- 5. CFCs are very harmful to the upper ozone layer. What does CFC stand for?
 - a. Chlorine Fluoride Carbonates
 - b. California Cars
 - c. Chlorofluorocarbons
 - d. Cauliflower Candies
- 6. True or False: Aerosol products, like hair spray, contain harmful CFCs.
 - a. False. The U.S. Government banned CFCs in aerosol products decades ago.
 - b. True. No restrictions have been set banning CFCs in aerosol products.
- 7. In 1987, an international conference was held that committed nations to a reduction in CFCs and other ozone-depleting substances. More than 190 countries have since signed the treaty. What is the name of this treaty?
 - a. Kyoto Protocol
 - b. Ozone Protection Protocol
 - c. Environmentally Friendly Treaty
 - d. Montreal Protocol

8. Can the Earth's protective ozone layer repair itself? If so, how long is this projected to take?
- No way, the ozone cannot heal itself
 - Yes, but this process would take thousands of years
 - Yes, because of the ban on CFCs, the upper ozone is already showing signs of repairing itself
 - No one knows
9. True or False: Mount Everest, the tallest mountain in the world, extends all the way up into the lower levels of the atmosphere.
- True. That is one tall mountain.
 - False. No chance, a mountain can't be as high as the clouds!



Image Courtesy of Free Nature Pictures

10. Fill in the blank. An ozone molecule is made up of _____.
- Oxygen and Nitrogen
 - Oxygen
 - Hydrogen and Nitrogen
 - CFCs
 - e.



Source: <http://www.atmosphere.mpg.de/media/archive/7990.gif>

11. Above which continent is the Earth's protective ozone layer the thinnest?
- North America
 - Asia
 - Antarctica
 - None of the above



Image Courtesy of www.nasa.gov

12. The production of which of the following chemicals has not been banned?
- a. Halons (fire extinguishers)
 - b. CFCs (solvents) and HCFCs (CFC substitutes)
 - c. Carbon Tetrachloride (solvents; chemical manufacture)
 - d. The production of all the above chemicals is banned in the United States



Source: www.kcif.or.jp/.../lik/archives/0404/04_2004.htm

13. VOCs are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. What does VOC stand for?
- a. Vaporized Ozone Chemicals
 - b. Very Overjoyed Cats
 - c. Volatile Organic Compounds
 - d. Vehicular Omitting Components
14. Human activity has increased the level of greenhouse gases in the atmosphere, which may have contributed to the average global warming of ___ degrees Fahrenheit over the last century.
- a. 0.8
 - b. 1.1
 - c. 2.3
 - d. 0. It doesn't feel any warmer to me!



Source: www.noaanews.noaa.gov/

15. Over-exposure to UV rays can lead to all of the following except:
- a. Skin cancer
 - b. Advanced hair loss
 - c. Cataracts
 - d. Weakened immune system
16. What is the name of the thin, cylindrical device that extends into an aerosol can that forces the product up and out of the can when the actuator button is pressed?
- a. Valve
 - b. Sucking straw
 - c. Accelerator
 - d. Dip Tube

17. _____ is the natural phenomenon which helps regulate the Earth's temperature and traps heat in the Earth's atmosphere.
- a. Coriolis effect
 - b. Ozone rectification
 - c. Oxidation
 - d. Greenhouse effect

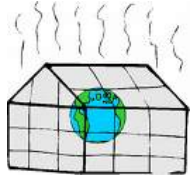
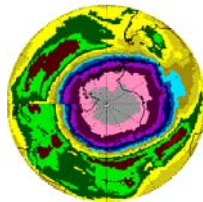


Image courtesy of Solcomhouse

18. What is "bad" ozone and where is it located?
- a. 10% of all ozone; made up of harmful pollutants and smog; located in lower altitudes near the Earth's surface
 - b. 90% of all ozone; made up of harmful pollutants and smog; located in lower altitudes near the Earth's surface
 - c. 10% of all ozone; made up of harmful pollutants and smog; located in higher altitudes far from the Earth's surface
 - d. 90% of all ozone; made up of harmful pollutants and smog; located in higher altitudes far from the Earth's surface



Source: www.theozonehole.com

19. Which of these recommendations is false when ultraviolet (UV) rays are present?
- a. Wear a hat and sunglasses
 - b. Seek shade whenever possible
 - c. Apply sunscreen if outside
 - d. Remove as much clothing as possible



Source: coolshade.tamu.edu/hats/hats1.htm

20. True or False: If aerosol products don't have a "No CFCs" logo on them, they contain harmful chemicals.
- True. If there is no logo, harmful and illegal chemicals have to be in the cans
 - False. Many manufacturers simply don't put the logo on the can, although CFCs are illegal in aerosol products



Image Courtesy of www.nocfcs.org

Answers:

- | | | |
|------|-------|-------|
| 1. d | 9. a | 17. d |
| 2. a | 10. b | 18. a |
| 3. b | 11. c | 19. d |
| 4. c | 12. d | 20. b |
| 5. c | 13. c | |
| 6. a | 14. b | |
| 7. d | 15. b | |
| 8. c | 16. d | |