

Environmental Chemistry

Section 1

Name _____

Class _____

1. Materials which can harm living things and do not occur naturally in the environment are called ...
 - A. Toxic
 - B. Furons
 - C. Pollutants
 - D. Phosphates
2. The Bayer company, from Germany, produced Aspirin in 1898, from a synthetically produced chemical derived from ...
 - A. Purple Cornflower
 - B. Aspen Tree Bark
 - C. Willow Tree Bark
 - D. Echinacea Tea
3. Large quantities of carbon dioxide (130 million tonnes each year) are released into the atmosphere by these ...
 - A. volcanoes
 - B. earthquakes
 - C. lightning strikes
 - D. refrigeration trucks
4. Certain types of bacteria, located in the root nodules of specific types of plants, such as alfalfa, do most of this in the soil ...
 - A. decompose
 - B. scavenge
 - C. fix nitrogen
 - D. eliminate pollutants
5. If soil lacks nitrogen, farmers can add fertilizer, or plant these ...
 - A. nitrogen-producing chemicals
 - B. nitrogen-fixing crops
 - C. magnesium compounds
 - D. soil enriched with bacteria
6. An organism that harms crops, people or structures is considered to be a ...
 - A. insect
 - B. parasite
 - C. bacteria
 - D. pest
7. Sometimes the use of a chemical can do more harm than good. When this occurs there can be opposing views about whether to continue using the chemical. This is called ...
 - A. a life situation
 - B. an issue
 - C. an environmental action
 - D. a viewpoint
8. To avoid waste chemicals dissolving or corroding some items in a sanitary landfill site, this is used ...
 - A. gravel and bacteria
 - B. gravel and compacted soil
 - C. plastic liner and compacted clay
 - D. biodegradable liner and pebbles

9. Fossil fuels are burned in barbecues, homes, vehicles and industrial plants. When this happens large amounts of carbon dioxide and water vapour are produced. The combustion reaction in a barbecue is represented by the following formula ...
- A. $C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O + \text{energy}$
 - B. $CO_2 + 2H_2O \rightarrow CH_4 + 2O_2 + \text{energy}$
 - C. $CH_2 + H_2 \rightarrow CO_2 + O_2 + \text{energy}$
 - D. $C_3H_8 + 4H_2O \rightarrow 3CO_2 + 5O_2 + \text{energy}$
10. Natural gas may contain hydrogen sulfide, a poisonous chemical. If natural gas does not contain hydrogen sulfide it is considered to be ...
- A. harmful
 - B. corrosive
 - C. sour
 - D. sweet
11. Toothpaste has a pH of 10. Toothpaste is ...
- A. neutral
 - B. a base
 - C. a strong acid
 - D. an acid base indicator
12. Testing various substances in the lab resulted in the collection of the following data. By using a few drops of universal indicator, the solutions all changed color. Those solutions that changed to a dark blue were identified as ...
- A. weak acids
 - B. weak bases
 - C. strong acids
 - D. strong bases
13. Acidic lakes are treated with lime (calcium hydroxide) to neutralize them. The compound calcium sulfate is produced. Calcium sulfate is a ...
- A. acid
 - B. base
 - C. salt
 - D. solution
14. Because they are important and needed in relatively large amounts, certain elements found in the environment are called 'macronutrients'. Which of the following is NOT a macronutrient?
- A. Mercury
 - B. Nitrogen
 - C. Calcium
 - D. Phosphorus
15. Selenium is a micronutrient that is necessary, along with Vitamin E, to help protect cell membranes from damage caused by hydrogen peroxide. If the optimum amount of selenium is not available (a deficiency), humans may contract diseases such as ...
- A. Scurvy and high blood pressure
 - B. Cancer and heart disease
 - C. Hydrophobia and heart attacks
 - D. Arthritis and cancer

16. Fats, oils and waxes are compounds composed of many carbon, hydrogen and oxygen atoms. Animals and plants produce them. These compounds are also known as ...
- A. carbohydrates
 - B. proteins
 - C. lipids
 - D. nucleic acids
17. An organic compound that can have between 40 to 500 amino acids is called a ...
- A. lipid
 - B. protein
 - C. starch
 - D. carbohydrate
18. When testing for the presence of organic compounds in different substances, different indicator solution can be used. Benedict's solution turns from blue to yellow-orange-red indicating this organic compounds is present.
- A. glucose
 - B. starch
 - C. fat/oil
 - D. protein
19. Active transport moves nutrients in an opposite direction to diffusion. To move nutrients from areas of low concentration to areas of high concentration requires ...
- A. special membranes
 - B. equal concentrations
 - C. energy
 - D. suction
20. Lichens are often the first organisms to colonize an area. They have been found in remote, isolated areas in Antarctica and high on mountains. Their substrate is ...
- A. snow
 - B. rock
 - C. water
 - D. dead animals

Illustrate and Label the **Nitrogen Cycle**

Environmental Chemistry

Unit C - Section 1

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Class _____

KEY

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The Nitrogen Cycle

