



## Environmental Chemistry

### Unit C - Section 3

Name \_\_\_\_\_

Class \_\_\_\_\_

1. Substances can be transported in air in three ways. The direction and distance these substances travel are determined by various factors. In Alberta airborne substances are carried eastward because of the ...
  - A. Rocky Mountains
  - B. Westerlies
  - C. Jet Stream
  - D. Rotation of the Earth
2. Because of their location, people living in Calgary would be most concerned with environmental pollution coming from ...
  - A. Medicine Hat Refinery
  - B. Fort McMurray Tar Sands
  - C. Trail B.C. Smelter
  - D. North Dakota Tire Plant
3. Examples of inorganic substances from de-icing roads, agricultural and home use, industrial products are ...
  - A. iron calcium, selenium
  - B. heavy metals (lead and mercury)
  - C. bacteria, viruses, protozoans
  - D. salt, fertilizers acid rain
4. Tiny spaces in the soil between the soil grains are called ...
  - A. pores
  - B. peats
  - C. permeables
  - D. impermeables
5. Some water can soak into the soil moving downward, dissolving harmful chemicals along the way and carrying them into the water table. This liquid is called ...
  - A. pollutant
  - B. limestone
  - C. leachate
  - D. acid water
6. The best way to keep the environment safe from potentially harmful substances is ...
  - A. dispersion
  - B. dilution
  - C. prevention
  - D. biodegradation
7. An environment where there is no oxygen is called ...
  - A. anabolic
  - B. aerobic
  - C. anaerobic
  - D. anabiotic



8. Some types of anaerobic bacteria remove chlorine from harmful chlorine-containing compounds like PCB's. The chlorine is removed from the pollutant's molecules and is replaced with ...
- oxygen
  - hydrogen
  - nitrogen
  - carbon
9. Chernobyl is a nuclear plant in Russia that had a meltdown. This put radiation into the atmosphere and into the soil. To remove the radiation from the groundwater at Chernobyl, these were used ...
- bacteria
  - fungi
  - viruses
  - plants
10. Photolysis is the breakdown of harmful compounds by sunlight. The formation of ozone is an example. Nitrogen dioxide is the pollutant. The formula that represents the photolysis process is ...
- $\text{NO}_2 \rightarrow \text{NO} + \text{O} \rightarrow \rightarrow \rightarrow \rightarrow \text{O} + \text{O}_2 \rightarrow \text{O}_3$
  - $2\text{NO} \rightarrow \text{N} + \text{O}_2 \rightarrow \rightarrow \rightarrow \rightarrow \text{O}_3 + \text{N} \rightarrow \text{NO}$
  - $\text{O} + \text{O}_2 \rightarrow \text{O}_3 \rightarrow \rightarrow \rightarrow \rightarrow \text{NO}_2 \rightarrow \text{NO} + \text{O}$
  - $\text{NO} \rightarrow \text{NO} + \text{O}_2 \rightarrow \rightarrow \rightarrow \rightarrow \text{O}_3 \rightarrow \text{O}_2 + \text{O}$
11. The bioaccumulation of harmful substances means the substance that is ingested or absorbed by an organism will increase in ...
- size
  - intensity
  - concentration
  - fatality
12. Spraying mosquito larvae, using an insecticide, is carefully monitored and controlled by the government. These spraying programs greatly reduce the numbers of mosquitoes that infect damage to livestock and people. One of the diseases that is transmitted by mosquitoes is ...
- SARS
  - WEST NILE VIRUS
  - MAD COW DISEASE
  - MUSCULAR DYSTROPHY
13. The EXXON VALDEZ went aground in Prince William Sound on the southern coast of Alaska in 1989. The composition of the oil changed when it spilled from the tanker. The lighter and smaller molecules ...
- dispersed into the air and water
  - landed on shore as 'tar balls'
  - sank to the bottom as sediment
  - floated on the surface and were recovered
14. Of the 260,000 barrels of oil that spilled from the Exxon Valdez, the percentage that reached the shoreline was estimated to be ...
- 14%
  - 13%
  - 2%
  - 1%
15. WHMIS was set up by the federal government to provide information on hazardous materials used in the ...
- Science lab
  - Research lab
  - Workplace
  - Household



16.



This symbol means ...

- A. poisonous
- B. corrosive
- C. dangerously reactive
- D. toxic

17.



This symbol means ...

- A. flammable
- B. oxydizing
- C. radioactive
- D. biohazardous

18.



This symbol means ...

- A. poisonous
- B. corrosive
- C. compressed gas
- D. biohazardous

19.



This symbol means ...

- A. biohazardous
- B. oxydizing
- C. explosive
- D. toxic

20. Anyone working with hazardous products must be familiar with WHMIS symbols and labeling. They must also be aware of information found on the MSDS information sheet that accompanies the product. The creation of the MSDS information sheet is the responsibility of the ...
- A. consumer
  - B. employer
  - C. supplier
  - D. government
21. There are two times when the consumer will transport hazardous products for use in the home. In both cases care must be taken to protect the people in the transporting vehicle from fumes or spills. For this reason the harmful materials must be placed in ...
- A. plastic bags
  - B. wooden crates
  - C. the car trunk or truck box
  - D. recycled plastic bins
22. Solid waste disposal has specific guidelines that should be followed to prevent contamination of the environment. If you have a can of hair spray that is not quite empty, you should ...
- A. place it in a sealed plastic bag and throw it in the garbage
  - B. take it to a waste treatment facility
  - C. take it to the waste collection site
  - D. empty the contents and throw it in the garbage