

## Chemistry

### Unit 1 Assessment

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Underline the correct answer.

1. Chemical changes of matter are those in which:
  - a) Matter changes its shape, volume and density.
  - b) There are no changes in the structure of matter.
  - c) The material retains its thermal properties.
  - d) Change the properties and structure of matter.
  
2. Which of the following statements is correct?
  - a) The study of chemistry is irrelevant in my daily life.
  - b) The obtained technological products are chemically harmful.
  - c) The study of chemistry has favored technological development.
  - d) Chemical technology produces necessarily negative changes.
  
3. All these phenomena are chemical transformations, except:
  - a) Combustion.
  - b) Corrosion.
  - c) Photosynthesis.
  - d) Evaporation.
  
4. Speaking of chemical substances it is fundamental to determine if they are poisonous to living things or not according to:
  - a) Dose consumed.
  - b) Their nature: natural or synthetic.
  - c) Concentration.
  - d) Their acidity: acidic or alkaline.
  
5. Scientific models include the following characteristics except:
  - a) They are always valid; not arise according to the experimental evidence.
  - b) They are representations of reality with central aspects.
  - c) They are a simplified schematic of the phenomenon under study.
  - d) They are constructed based on the behavior of the variables of interest.
  
6. An example of a chemical model would be:
  - a) The water cycle (or hydrological cycle).
  - b) The origin of species evolution theory.
  - c) The periodic table of elements.
  - d) Kepler's laws of planetary motion.
  
7. In the following risks of drinking alcohol, what is the direct impact on health?

- a) The possibility of being an object of ridicules at a party, meeting or bar against acquaintances or strangers.
- b) The possibility of confusion, motor incoordination, liver damage or being in a coma.
- c) The possibility of suffering or causing a car accident by decreasing a reflex response and overconfident.
- d) The possibility to face vehicular traffic violations, administrative, criminal or even jail.

8. If we say that a level of carbon monoxide in the air of 1500 ppm is "immediately dangerous to life and health", we are referring to:

- a) The toxicity of Co in the blood.
- b) Co permeability in membranes.
- c) Co viscosity in hemoglobin.
- d) The concentration of Co in the air.

9. The alcohol concentration in a beverage is in degrees, and it is a measure of volume / volume. Thus, a drink such as vodka can have a graduation of 50°. This means that:

- a) There are 50 *ml* of alcohol in 100 *ml* of vodka.
- b) There are 50 *ml* of alcohol in 100 *g* of vodka.
- c) There are 50 *mg* of alcohol in 100 *l* of vodka.
- d) There are 50 *g* of alcohol in 100 *l* of vodka.

10. In the next state of aggregation, molecules or particles are strongly bound together by cohesion forces, and they have a definite volume and shape:

- a) Gas.
- b) Liquid.
- c) Plasma.
- d) Solid.

11. In the next state of aggregation, molecules or particles are slightly joined together by cohesion forces, and they have a definite volume and an indefinite form:

- a) Gas.
- b) Liquid.
- c) Plasma.
- d) Solid.

12. Sublimation is a transition state from:

- a) Liquid to gas.
- b) Solid to gas.
- c) Liquid to solid.
- d) Solid to liquid.

13. Mayonnaise is an example of:

- a) Crystalline solid.
- b) Colloidal gel.
- c) Colloidal emulsions.
- d) Colloidal foam.

14. Which of the following materials is an example of a suspension?

- a) Tamarind water.
- b) Hibiscus water.

- c) Homogenized milk.
- d) Refreshment gas.

15. Which of the following is a homogeneous mixture?

- a) Vegetable soup.
- b) Filing of iron and copper.
- c) Caesar dressing.
- d) Chamomile tea.

16. Heterogeneous mixtures are those:

- a) That can be easily separated.
- b) Whose components are distinguished at first glance.
- c) That are separated by crystallization.
- d) Whose components are not distinguished at first glance.

17. What method of separating mixtures would you use to separate a mixture of cooked pasta in hot water?

- a) Evaporation.
- b) Filtration.
- c) Decanting.
- d) Recovery.

18. The principle of mass conservation says that:

- a) Energy is neither created nor destroyed; it is only turned into other forms.
- b) Matter is indivisible, so it is preserved in a process of transformation.
- c) Energy is neither created nor destroyed in all atomic processes.
- d) The total mass of the reactants is equal to the total mass of products.

19. Distilled water is an example of:

- a) Homogeneous mixture.
- b) Dissolution.
- c) Pure substance.
- d) Alloy.

20. How would you separate the gas from the liquid in a soda?

- a) By decantation.
- b) By centrifugation.
- c) By solubility difference.
- d) By extraction or precipitation.

## Unit 1 Assessment Answer Key

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