

Biology Lab CCR Practice Test: Chapter 2 The Chemistry of Life

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. The three particles that make up atoms are
 - a. protons, neutrons, and isotopes.
 - b. neutrons, isotopes, and electrons.
 - c. positives, negatives, and neutrals.
 - d. protons, neutrons, and electrons.

- _____ 2. What are found in the space surrounding the nucleus of an atom?
 - a. protons
 - b. electrons
 - c. neutrons
 - d. ions

- _____ 3. Subatomic particles are
 - a. particles that are smaller than an atom.
 - b. made up of a single atom.
 - c. particles found beneath atoms.
 - d. composed of several atoms.

- _____ 4. If an atom contains 3 protons, 4 neutrons, and 3 electrons, its mass number is
 - a. 3.
 - b. 4.
 - c. 7.
 - d. 11.

- _____ 5. A chlorine atom that has 17 protons and 18 neutrons is called
 - a. chlorine-17.
 - b. chlorine-18.
 - c. chlorine-35.
 - d. chlorine-1.

- _____ 6. Isotopes are atoms of the same element with the same number of protons and a different number of
 - a. electrons.
 - b. molecules.
 - c. neutrons.
 - d. ions.

- _____ 7. If an atom contains 11 protons and 12 neutrons, its atomic number is
 - a. 1.
 - b. 11.
 - c. 12.
 - d. 23.

- _____ 8. Which of the following is a substance formed by the chemical joining of two or more elements in definite amounts?
 - a. compound
 - b. isotope
 - c. nucleus

d. enzyme

- _____ 9. Which of the following makes up a molecule of water?
- one atom of hydrogen and one atom of oxygen
 - one atom of sodium and one atom of chlorine
 - one atom of hydrogen and two atoms of oxygen
 - two atoms of hydrogen and one atom of oxygen
- _____ 10. Which of the following is NOT true about chlorine?
- It is a poisonous, greenish gas.
 - It combines with sodium to form table salt.
 - It was used in battles in World War I.
 - It is not reactive.
- _____ 11. Which of the following statements about a compound is true?
- The physical and chemical properties of a compound are usually very different from those of the elements from which it is formed.
 - Only the physical properties of a compound are usually the same as those of the elements from which it is formed.
 - Only the chemical properties of a compound are usually the same as those of the elements from which it is formed.
 - The physical and chemical properties of a compound are usually the same as those of the elements from which it is formed.
- _____ 12. A covalent bond is formed as the result of
- transferring electrons.
 - sharing electrons.
 - transferring protons.
 - sharing protons.
- _____ 13. What type of electron is available to form bonds?
- valence
 - nucleus
 - ionic
 - covalent
- _____ 14. Water molecules are polar, with the
- oxygen side being slightly positive and the hydrogen side being slightly negative.
 - oxygen and hydrogen sides being slightly positive.
 - oxygen and hydrogen sides being slightly negative.
 - oxygen side being slightly negative and the hydrogen side being slightly positive.
- _____ 15. In a water molecule, shared electrons spend more time around the oxygen atom than the hydrogen atoms. As a result, the oxygen atom is
- slightly negative.
 - very negative.
 - slightly positive.
 - very positive.
- _____ 16. A solution is a
- combination of isotopes.
 - chemical reaction.
 - mixture in which the substances are evenly spread out.

d. mixture in which undissolved substances do not settle out.

- _____ 17. If you stir salt into boiling water, you produce a
- a. mixture called a suspension.
 - b. mixture called a solution.
 - c. solution and suspension.
 - d. mixture only.
- _____ 18. When salt is dissolved in water, water is the
- a. reactant.
 - b. solution.
 - c. solute.
 - d. solvent.
- _____ 19. While preparing a cell culture, a scientist places a colony of bacteria into distilled water and stirs it up. This mixture of water and living cells would best be called
- a. a solution.
 - b. a suspension.
 - c. a buffer.
 - d. an adhesion.
- _____ 20. If the pH of stomach acid and of oven cleaner were measured,
- a. both would be below 7.
 - b. both would be above 7.
 - c. the pH of stomach acid would be above 7, but the pH of oven cleaner would be below 7.
 - d. the pH of stomach acid would be below 7, but the pH of oven cleaner would be above 7.

