

Chemistry
Unit 2 Assessment

Date: _____

Name: _____

Underline the correct answer.

1. The atomic mass of an atom is:
 - a) The addition of the mass of protons, neutrons and electrons.
 - b) The addition of the mass of protons and neutrons.
 - c) The addition of the mass of protons.
 - d) The addition of the mass of neutrons.

2. The atomic number of an atom is:
 - a) The total quantity of protons, neutrons and electrons.
 - b) The total quantity of protons and neutrons.
 - c) The total quantity of protons.
 - d) The total quantity of neutrons.

3. The valence of an atom depends on:
 - a) The total number of electrons in the atom.
 - b) The difference between the total neutrons and the total protons.
 - c) The difference between the total electrons and the total protons.
 - d) The number of electrons in the external orbit.

4. The elements that belong to the same group in the periodic table have all of the following properties in common except for:
 - a) The atomic mass.
 - b) The valence or valences.
 - c) The physical properties.
 - d) The chemical properties.

5. The elements that belong to the same period in the table of elements are similar in:
 - a) The atomic mass.
 - b) The valence or valences.
 - c) The physical properties.
 - d) The chemical properties.

6. The following order of elements: aluminum, silicon, phosphorus, sulfur, chlorine and argon is defined because of:
 - a) Their valence or valences.
 - b) Their table period.
 - c) Their atomic number.
 - d) Their group in the table.

7. All of the following are non-metals properties, except for:
 - a) Tendency to form anions in aqueous solution.
 - b) Good thermal and electric conductors.

- c) In pure state and opaque.
 - d) Liquefied at relatively low temperatures.
8. Which of the following is metal?
- a) Fluorine.
 - b) Bromine.
 - c) Iodine.
 - d) Osmium.
9. According to the octet rule, which group of elements is inert since it has the external electronic layer full?
- a) Noble gases.
 - b) Lanthanides.
 - c) Alkali metals.
 - d) Halogens.
10. Which elements in the periodic table are the only two that do not fulfill the octet rule, but the dual or duo?
- a) Oxygen and carbon.
 - b) Silver and platinum.
 - c) Uranium and iridium.
 - d) Hydrogen and helium.
11. The atom whose atomic number is different from the proton number is called:
- a) Ion.
 - b) Anion.
 - c) Isotope.
 - d) Cation.
12. What changes in an element atoms when they turn into ions?
- a) The number of electrons.
 - b) The number of neutrons.
 - c) The number of protons.
 - d) The atomic number.
13. Covalent bonds are formed between:
- a) Non-Metals and non-metals.
 - b) Non-metals and metals.
 - c) Metals and metals.
 - d) Anions and cations.
14. What happens with the valence electrons in the atoms of participant elements in ionic bonds?
- a) They detach from atoms and they are shared.
 - b) They transfer from metal to non-metal.
 - c) They detach from non-metals and are set free.
 - d) They are shared in pairs.
15. The resulting substance in a covalent bond is called:

- a) Solid crystal.
- b) Ionic compound.
- c) Molecular compound.
- d) Metallic compound.

16. Who from the following scientists established the elements properties in periodic function of their atomic mass?

- a) Dimitri Mendeleiev.
- b) John Newlands.
- c) Stanislao Canizzaro.
- d) John Dalton.

17. What is proposed in the atomic "plum-pudding model" by Thomson?

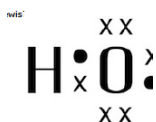
- a) Electrons can only have certain energy values, that is, energy is quantized.
- b) Atoms make all matter, they are indivisible and tiny.
- c) Atoms look like a tiny solar system where the nucleus is in the center and electrons revolve around it.
- d) Atoms have a continuous part with positive charge and negative charges are scattered around it.

18. Why carbon has a negative valence -4 and a positive valence +4?

- a) Because it has 4 electrons in the external orbit; therefore, it accepts up to 2 electrons from another atom.
- b) Because it has 4 electrons in the external orbit; therefore it releases up to 2 electrons from another atom.
- c) Because it has 4 electrons in the external orbit so that it is equally probable that it accepts or releases 4 electrons from another atom.

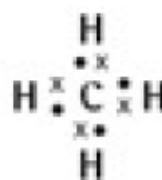
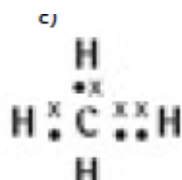
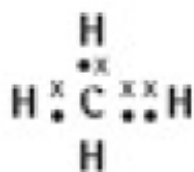
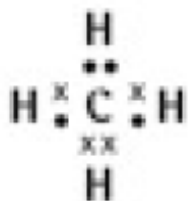
19. What compound corresponds to the following Lewis diagram?

- a) Hydrogen peroxide.
- b) Hydrogen monoxide.
- c) Hydro ion.
- d) Hydroxide anion.



20. Choose the Lewis diagram that corresponds to the methane molecule whose chemical formula is CH₄:

- a) b) c) d)



Chemistry

Unit 2 Assessment Answer Key

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