

Chemistry
Unit 4 Assessment

Date: _____

Name: _____

Choose the correct answer.

1. A substance, considered acid has a _____ flavor.
 - a) Bitter.
 - b) Sweet.
 - c) Sour.
 - d) Bittersweet.

2. A substance with capacity to donate a proton when reacting with water is:
 - a) A base.
 - b) A salt.
 - c) An acid.
 - d) A hydronium.

3. A substance considered a base has a _____ flavor.
 - a) bitter
 - b) sweet
 - c) sour
 - d) bittersweet

4. The process through which a molecule separates in ions when it is in contact with water is known as:
 - a) Electrification.
 - b) Ionization.
 - c) Dissociation.
 - d) Decomposition.

5. Sodium hydroxide (NaOH) is:
 - a) A base.
 - b) A salt.
 - c) An acid.
 - d) A hydroxil.

6. Arrhenius theory is quite adequate to explain behavior in water of:
 - a) Strong electrolytes.
 - b) Light electrolytes.
 - c) Neutral electrolytes.
 - d) All kinds of electrolytes.

7. The most probable pH value for an extremely acid solution is:

- a) 2
 - b) 6
 - c) 7
 - d) 14
8. The most probable pH value for an extremely basic solution is:
- a) 9
 - b) 3
 - c) 7
 - d) 14
9. pH is a scale that measures concentration of _____ ions.
- a) H^+
 - b) OH^+
 - c) OH^-
 - d) H
10. pH in a sodium bicarbonate at a concentration of 1×10^{-8} M (mole/L) is:
- a) -8
 - b) -6
 - c) 6
 - d) 8
11. An acid is a substance that:
- a) Transfers electrons.
 - b) Transfers protons.
 - c) Accepts protons.
 - d) Accepts electrons.
12. An ion element or molecule oxidizes if:
- a) It gains electrons.
 - b) It loses electrons.
 - c) It gains protons.
 - d) It loses protons.
13. The raise in the oxidation number of an element means that:
- a) It is reduced.
 - b) It is neutralized.
 - c) It is oxidized.
 - d) It is crystallized.
14. In the past, it was believed that elements, ions or molecules oxidize when interacting with:
- a) O_2

- b) H_2O
- c) H_3O^+
- d) O^3

15. The oxidation number of each hydrogen atom in a water molecule is:

- a) 1
- b) -1
- c) 2
- d) -2

16. The oxidation number in the ion H_3O^+ is:

- a) +2
- b) +1
- c) -1
- d) -2

17. The oxidation number of an atom in its elemental form is:

- a) 1
- b) -1
- c) 0
- d) -2

18. The sum of the oxidation number of elements that form a molecule is:

- a) 1
- b) -1
- c) 0
- d) -2

19. Besides oxygen, _____ is produced in photosynthesis.

- a) H_2O
- b) O_2
- c) $\text{C}_6\text{H}_{12}\text{O}_6$
- d) CH_4

20. Besides carbon dioxide, _____ is produced in respiration.

- a) H_2O
- b) O_2
- c) $\text{C}_6\text{H}_{12}\text{O}_6$
- d) CH_4

Chemistry

Unit 4 Assessment Answer Key

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