



# Science 7



1. All the elements in a group in the periodic table have the same \_\_\_\_\_.  
A. number of valence electrons      C. atomic mass  
B. atomic number      D. isotopes
2. Elements are arranged in order of \_\_\_\_\_.  
A. decreasing atomic number      C. increasing atomic number  
B. decreasing atomic mass      D. increasing atomic mass
3. Which of the following is a pure substance made up of two or more types of atoms or elements?  
A. mixture      C. element  
B. compound      D. isotope
4. Which of the following is the smallest part of a compound whose properties are the same as those of the compound?  
A. mixture      C. molecule  
B. atom      D. element
5. Oxygen cannot be further subdivided into simple substances by any physical or chemical means. Therefore, it is \_\_\_\_\_.  
A. compound      C. atom  
B. molecule      D. element
6. Which factor would not affect the solubility of sugar in water?  
A. add sugar to the water      C. stir the water and sugar  
B. grind the sugar to make it finer      D. heat the water and sugar
7. Which process or processes affect the speed of dissolving?  
A. particle size and stirring only  
B. particle size only  
C. stirring only  
D. particle size, temperature and stirring

8. Which statement about the process of dissolving is true?
- A. The solute spreads out in all directions in a solvent because the solvent and solute particles attract one another.
  - B. The process of dissolving releases energy in the form of heat.
  - C. Applying heat often speeds up the process of dissolving because it breaks down the repellent barrier of the solute particles.
  - D. Once a solute, such as a salt crystal, is dissolved in water, it can never return to its original crystal state.
9. Which type of solution has a pH of 8?
- A. weak acidic
  - B. neutral
  - C. strong acid
  - D. basic
10. A solution that conducts electricity in solution form is \_\_\_\_\_.
- A. electrolyte
  - B. anion
  - C. cation
  - D. none of these
11. Which of the following word pairs correctly completes the sentence below?
- \_\_\_\_\_ are corrosive substances characterized as having a strong smell, a sour taste and a \_\_\_\_\_.
- A. acids; pH less than 7
  - B. bases; pH greater than 7
  - C. acids; pH greater than 7
  - D. bases; pH less than 7
12. Which of the following statements is true?
- A. A concentrated solution has a large amount of solute dissolved in a large amount of solvent.
  - B. A dilute solution has a small amount of solute dissolved in a small amount of solvent.
  - C. A concentrated solution has a small amount of solute dissolved in a large amount of solvent.
  - D. A dilute solution has a small amount of solute dissolved in a large amount of solvent.
13. Which one of the following statements is correct?
- A. A solute dissolves in a solvent to make up a solution.
  - B. A solute dissolves in a solution to make up a solvent.
  - C. The solvent in seawater is salt.
  - D. A solution dissolves in a solvent to make up a solute.

14. A solution in a beaker has some undissolved solute lying on the bottom of the beaker. If the rate of crystallization is equal to the rate of dissolution of the excess solute, the solution is described as \_\_\_\_\_.

- A. dilute
- B. concentrated
- C. unsaturated
- D. saturated

15. Recognizes the concept of pH

A solution with  $\text{pH} = 0$  is \_\_\_\_\_.

- A. acidic
- B. basic
- C. amphoteric
- D. neutral

16. A fruit juice is tested for its pH value. What could be its possible pH if it turns red?

- A. more than 8
- B. between 6.5 and 7.5
- C. 7
- D. less than 3

17. If the pH of a solution is 7.5, its nature is \_\_\_\_\_.

- A. neutral
- B. weakly acidic
- C. basic
- D. strongly acidic

18. Acids taste \_\_\_\_\_.

- A. sweet
- B. bitter
- C. sour
- D. salty

19. Acids make litmus paper turn \_\_\_\_\_.

- A. red
- B. blue
- C. yellow
- D. black

20. Which of the following statements is correct?

- A. All metals are ductile.
- B. All non-metals are ductile.
- C. Generally, metals are ductile.
- D. Some non-metals are ductile.

21. Metals tend to form \_\_\_\_\_.

- A. cations
- B. cations and anions
- C. anions
- D. do not form ions

22. The ability of metals to be drawn into thin wire is known as \_\_\_\_\_.

- A. ductility
- B. luster
- C. malleability
- D. conductivity

23. Aluminum is used for making cooking utensils. Which of the following properties of aluminum are responsible for this?

- i. good thermal conductivity
- ii. good electrical conductivity
- iii. ductility
- iv. high melting point

- |              |               |
|--------------|---------------|
| A. i and ii  | C. ii and iii |
| B. i and iii | D. i and iv   |

24. If a substance breaks easily, it is said to be \_\_\_\_\_.

- |             |               |
|-------------|---------------|
| A. magnetic | C. conductive |
| B. brittle  | D. ductile    |

25. Which of the following best describes non-metals?

- |              |                    |
|--------------|--------------------|
| A. dull      | C. good conductors |
| B. malleable | D. ductile         |

26. Which one of the following substances is known as the universal solvent?

- |            |        |
|------------|--------|
| A. water   | C. oil |
| B. methane | D. air |

27. Which one of the following is an example of a solution?

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|----------------------------|------------------|
| A. sand particles in water | C. orange squash |
| B. paint                   | D. vinegar       |

28. Which of the following is not a solution?

- |                  |                  |
|------------------|------------------|
| A. seawater      | C. glass of milk |
| B. glass of cola | D. cup of coffee |

29. Identifies basic solution

Bases feel \_\_\_\_\_.

- |             |          |
|-------------|----------|
| A. rough    | C. moist |
| B. slippery | D. dry   |

30. Bases are \_\_\_\_\_.

- |                   |                    |
|-------------------|--------------------|
| A. sour in taste  | C. sweet in taste  |
| B. salty in taste | D. bitter in taste |