Al Amal Learning Center

Class 10 Chemistry Chapter 2 MCQ Quiz Online | Level 1

Class 10 Chemistry · Chapter 2: Matter

Name: _____ Date: _____ Score: _____ / 30

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1. What is the name of the change of state from solid directly to gas?

A) Deposition
B) Condensation
C) Sublimation
D) Evaporation

2. What is the name of the change of state from gas directly to solid?

A) Deposition
B) Sublimation
C) Freezing
D) Condensation

3. Internal energy of a substance is the sum of:

A) Chemical and nuclear energy
B) Kinetic energy and potential energy
C) Heat and light energy
D) Pressure and volume energy

4. In a solid, the particles:

A) Move freely in all directions
B) Slide past one another
C) Are far apart
D) Vibrate in fixed positions

5. The heat energy absorbed during melting at the melting point is called:

A) Latent heat of fusion
B) Latent heat of vaporization
C) Specific heat
D) Heat of combustion

6. The heat energy absorbed during boiling at the boiling point is called:

A) Latent heat of fusion
B) Specific heat
C) Latent heat of vaporization
D) Heat of sublimation

7. Which of the following is true about evaporation?

A) It occurs only at the boiling point
B) It occurs only at the surface of a liquid
C) It forms bubbles throughout the liquid
D) It does not depend on temperature

8. The boiling point of water at sea level is:

A) 90°C
B) 80°C
C) 120°C
D) 100°C

9. Boyle's law relates which two variables of a gas at constant temperature?

A) Pressure and volume
B) Volume and temperature
C) Volume and moles
D) Pressure and moles

10. Which equation represents Charles's law?

A) PV = constant
B) V/n = constant
C) V/T = constant
D) P/T = constant

11. Avogadro's law states that, at constant temperature and pressure, the volume of a gas is directly proportional to:

A) Its pressure
B) Its number of moles
C) Its density
D) Its molar mass

12. According to Graham's law, the rate of diffusion of a gas is inversely proportional to:

A) The molar mass
B) The temperature
C) The square root of the molar mass
D) The square of the molar mass

13. Which of the following substances easily undergoes sublimation?

A) Sodium chloride
B) Camphor
C) Sugar
D) Iron

14. Dye sublimation is used in industry to:

A) Print designs on objects such as T-shirts and mugs
B) Melt metals
C) Purify water
D) Cool buildings

15. Which process is used to preserve food by freeze-drying?

A) Condensation
B) Deposition
C) Boiling
D) Sublimation

16. Why does the temperature stay constant while ice is melting?

A) The heat is lost to the surroundings
B) The heat increases the potential energy of the particles, not their kinetic energy
C) The particles stop moving
D) The heat increases the kinetic energy of the particles

17. On a heating curve, the temperature rises steadily from A to B. During this segment, the added heat mainly:

A) Overcomes intermolecular forces
B) Melts the solid
C) Increases the kinetic energy of the particles
D) Decreases the potential energy

18. In a cooling curve, which quantity decreases during the flat region where a gas condenses into a liquid?

A) Kinetic energy
B) Potential energy
C) Temperature
D) Number of particles

19. Why does sweating cool the body?

A) Sweat is colder than the body
B) Sweat condenses on the skin
C) The most energetic molecules leave, lowering the average kinetic energy of the remaining liquid
D) Sweat increases the pressure on the skin

20. Perfume applied to the palm makes it feel cold because:

A) Perfume is stored at a low temperature
B) Perfume evaporates by absorbing energy from the skin
C) Perfume condenses on the skin
D) Perfume freezes on the skin

21. Why does water boil at a lower temperature at high altitudes?

A) The atmospheric pressure is lower
B) The atmospheric pressure is higher
C) Water has less mass there
D) There is more oxygen there

22. A pressure cooker cooks food faster because:

A) It lowers the boiling point of water
B) It removes heat from the food
C) It increases the evaporation of water
D) High pressure raises the boiling point, so the water gets hotter before it boils

23. A gas occupies 2 L at 1 atm. What is its volume at 4 atm if the temperature is constant?

A) 0.5 L
B) 2 L
C) 4 L
D) 8 L

24. A gas has a volume of 2 L at 300 K. What is its volume at 600 K if the pressure is constant?

A) 1 L
B) 4 L
C) 2 L
D) 6 L

25. In kinetic particle theory, why does the pressure of a gas increase when its volume is decreased at constant temperature?

A) The particles move faster
B) The particles become heavier
C) The particles collide with the container walls more frequently
D) The number of particles increases

26. If the number of moles of a gas is doubled at constant temperature and pressure, its volume:

A) Is halved
B) Stays the same
C) Becomes four times larger
D) Doubles

27. Hydrogen (molar mass 2) and oxygen (molar mass 32) are at the same temperature. Which statement is correct?

A) Hydrogen diffuses faster because its molecules move faster on average
B) Oxygen diffuses faster because it is heavier
C) Both diffuse at the same rate
D) Oxygen molecules have more average kinetic energy

28. Why does the rate of diffusion of gases increase with temperature?

A) Molecules lose kinetic energy
B) The molecules become lighter
C) The intermolecular forces increase
D) Molecules move faster and collide more frequently and energetically

29. Why is a liquid medicine usually absorbed faster than a solid tablet?

A) Its particles are already dispersed
B) It has a higher molecular mass
C) It has a lower concentration
D) It does not need to diffuse

30. Snow forming directly from water vapour in cold air is an example of:

A) Sublimation
B) Condensation
C) Freezing
D) Deposition

Answer key

1-C 2-A 3-B 4-D 5-A 6-C 7-B 8-D 9-A 10-C

11-B 12-C 13-B 14-A 15-D 16-B 17-C 18-B 19-C 20-B

21-A 22-D 23-A 24-B 25-C 26-D 27-A 28-D 29-A 30-D