

- An object with particles close together and vibrating describes a _____.
 a) Gas b) Liquid **c) Solid** d) All three
- A burning candle is an example of _____ state of matter.
 a) Gas b) Liquid c) Solid **d) All three**
- During which process a gas becomes a liquid _____.
 a) Melting b) Freezing **c) Condensing** d) Boiling
- A solid can _____.
a) have a fixed shape b) be easily compressed
 c) take a shape of container d) have freely moving molecules
- According to kinetic molecular theory, the pressure exerted by a gas is caused by the _____.
a) bombardment of the gas molecules on the walls of the container.
 b) collision between gas molecules.
 c) large distances between gas molecules.
 d) random motion of the gas molecules.
- If a gas is heated in a sealed cylinder, then _____ increases.
 a) pressure inside the container
 b) average kinetic energy of the particles
 c) temperature of the gas
d) All of them
- A gas in a container of fixed volume is heated. What happens to the molecules of the gas?
 a) They collide less frequently. b) They expand.
c) They move faster. d) They move further apart.
- In a liquid, some energetic molecules break free from the surface even when the liquid is too cold for bubbles to form. What is the name of this process?
 a) boiling b) condensation c) convection **d) evaporation**
- What happens to the molecules of a gas when the gas changes into a liquid?
a) They move closer and lose energy.
 b) They move closer and gain energy.
 c) They move apart and lose energy.
 d) They move apart and gain energy
- A substance has a melting point of -17°C and a boiling point of 117°C . In which state does the substance exist at -10°C and at 110°C ?

	at -10°C	at 110°C
a	Solid	liquid
b	solid	gas
c	liquid	liquid
d	liquid	gas

Ans = Liquid, Liquid

1. Which of the following is a state of matter?
A. Heat
C. gas
B. Light
D. Sound
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2. In which state of matter do particles have a fixed shape and fixed volume?
A. Solid
C. Gas
B. Liquid
D. Plasma
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3. Which state of matter has a fixed volume but no fixed shape?
A. Solid
C. Gas
B. Liquid
D. Vacuum
-
4. Which process changes water into ice?
A. Melting
C. Evaporation
B. Freezing
D. Condensation
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5. The particles in a solid are:
A. Very far apart and move freely
B. Close together and vibrate in fixed positions
C. Far apart and fixed in position
D. Not moving at all
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6. The change of a solid into a liquid is called:
A. Freezing
C. Condensation
B. Melting
D. Evaporation
-
7. The change of a liquid into a gas is called:
A. Melting
C. Evaporation
B. Freezing
D. Deposition

8. The change of a gas into a liquid is called:

A. Condensation

C. Freezing

B. Sublimation

D. Melting

9. Which state of matter can be compressed easily?

A. Solid

C. Gas

B. Liquid

D. Metal

10. Boyle's law states that at constant temperature, the volume of a gas is:

A. Directly proportional to pressure

B. Inversely proportional to pressure

C. Equal to pressure

D. Not related to pressure

11. Boyle's law is valid when which quantity is kept constant?

A. Pressure

C. Temperature

B. Volume

D. Mass only

12. If the pressure of a gas is increased, its volume will:

A. Increase

C. Remain zero

B. Decrease

D. Become double always

Answer: B. Decrease

13. A gas has a volume of 4 L at a pressure of 2 atm. If the pressure is increased to 4 atm, what is the new volume?

A. 1 L

C. 4 L

B. 2 L

D. 8 L

14. A gas occupies 6 L at 3 atm. What pressure is needed to compress it to 2 L at constant temperature?

A. 3 atm

C. 9 atm

B. 6 atm

D. 12 atm

15. Charles' law states that at constant pressure, the volume of a gas is directly proportional to its:
- A. Pressure
 - B. **Temperature in Kelvin**
 - C. Mass
 - D. Density
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16. If the temperature of a gas is increased at constant pressure, its volume will:
- A. Decrease
 - B. **Increase**
 - C. Become zero
 - D. Remain unchanged
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17. A gas has a volume of 2 L at 300 K. What will be its volume at 600 K if pressure is constant?
- A. 1 L
 - B. 2 L
 - C. **4 L**
 - D. 6 L
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18. A gas occupies 5 L at 250 K. What is its volume at 500 K at constant pressure?
- A. 2.5 L
 - B. 5 L
 - C. **10 L**
 - D. 15 L
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19. According to the kinetic theory, gas particles are in:
- A. Fixed positions
 - B. **Continuous random motion**
 - C. Circular motion only
 - D. No motion
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20. At absolute zero temperature, the kinetic energy of gas particles is theoretically:
- A. Maximum
 - B. **Minimum**
 - C. Infinite
 - D. Equal to pressure
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