Karan Arora **R.L. Institute** **M: 99968-68554**

Class : IX

"MATTER IN OUR SURROUNDINGS"

Worksheet – 1

Multiple Choice Questions :

Q.1 Which of the following is not a matter?
a) vacuum b) air c) common salt d) chair

Q.2 Which of the following sets contains only examples of matter?
a) Chalk , heat , ammonia
b) Love , book , smell of perfume
c) Almonds , cold drink , sand
d) Common salt , hate , milk

Q.3 Which of the following type of matter has the weakest interparticle forces of attraction?
a) Steam b) Liquid water c) sand d) iron

Q.4 When a pinch of common salt is dissolved in 50mL of H_2O taken in graduated cylinder. Which of the following observation is correct?
a) Level of water in the graduated cylinder decreases.
b) Level of water in the graduated cylinder increases.
c) Level of water in the graduated cylinder remains same.
d) All are correct

Q.5 The correct order of decreasing density of the following is :
a) cotton > water > honey
b) Honey > water > cotton
c) water > honey > cotton
d) honey > cotton > water

Q.6 Which of the following states of matter possess fluidity?
a) solid , liquid b) solid , gas c) liquid , gas d) all the three

Q.7 In solid, liquid and gas the interparticle spaces increase in the order:
a) liquid > gas > solid b) solid > liquid > gas c) gas > solid > liquid d) none

Q.8 Which of the following states of matter has only vibrational motion?
a) solid b) liquid c) gas d) plasma

Fill in the Blanks :

Q.9 The particles of matter continuously keep on _____ and hence possess _____ energy.

Q.10 The arrangement of particles in _____ is highly ordered , less ordered in _____ but there is no order in _____.

Q.11 The intermixing of particles of two different types of matter on their own is called _____.

Q.12 The interparticle forces of attraction is _____ in solids , _____ in liquids and _____ in gases.

Q.13 Diffusion occurs fastest in _____ than in _____ while it does not occur in _____.

Match The Following Questions :

Q.14 Match column I and column II

Column I		Column II	
A.	liquid	I.	Neither definite shape nor definite volume.
B.	Solid	II.	Definite volume but no definite shape.
		III.	Definite shape and definite volume.

Q.15 Match column I and column II

Column I		Column II	
A.	Particles move randomly	I.	Water
B.	Particles are not free to move	II.	Sugar
C.	Layers can slide over each other	III.	O_2 gas

Answer The Following Questions :

Q.16 What is Matter?

Q.17 Which of the following are matter?

Chair , air , love , smell , hate , almonds , thought , cold , lemon water , smell of perfumes

Q.18 Give reason : The smell of hot sizzling food reaches you several meters away, but to get the smell from cold food you have to go close.

Q.19 What are the characteristics of particles of matter?

Q.20 A substance has a definite volume but no definite shape. State whether the substance is solid , liquid or gas.

Q.21 What are fluids?

Q.22 Name the physical state of matter which can be easily compressed.

Q.23 What are the characteristics of states of matter.

Answers

1. a 2. c 3. a 4. c 5. b 6. c 7. b
8. a
9. Moving , Kinetic.
10. Solids , liquids , gases.
11. Diffusion.
12. Strong , weak , weakest.
13. Gases , liquids , solids.
14. A – II ; B – III
15. A – III ; B – II ; C – I

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Worksheet – 2

Multiple Choice Questions :

Q.1 Particles of matter are continuously moving as they possess _____ energy.
a) Potential b) Mechanical c) Chemical d) Kinetic

Q.2 The boiling point of diethyl ether , acetone and n-butyl alcohol are 35℃ , 56℃ and 118℃ respectively. Which one of the following correctly represents their boiling points in kelvin scale?
a) 306 K , 329 K , 391 K b) 308 K , 329 K , 392 K
c) 308 K , 329 K , 391 K d) 329 K , 392 K , 308 K

Q.3 The melting point of four substances A , B , C and D are 78℃ , 262℃ , 100℃ , 168℃ . The increasing order of their interparticle forces of attraction is :
a) A , C , D , B b) A , B , D , C c) A , C , B , D d) A , D , B , C

Q.4 The boiling point of four liquids P , Q , R and S are 308 K , 285.5 K , 351 K , 373 K. These are separately sprayed on your palm. Which of them will produce maximum cooling?
a) P b) Q c) R d) S

Q.5 On Kelvin scale 0℃ is equal to :
a) 273 K b) – 273 K c) 0 K d) 100 K

Q.6 Identify the condition under which air is liquefied ?
a) Low temperature , Low pressure b) High temperature , Low pressure
c) High temperature , High pressure d) Low temperature , High pressure

Q.7 Liquids diffuse slowly as compared to gases because :
a) The molecules of liquids are heavy.
b) The molecules of liquids move fast.
c) Liquids do not have any definite shape.
d) In liquid state, the intermolecular forces are more.

Q.8 Seema visited a Natural gas Compressing Unit and found that the gas can be liquified under specific conditions of temperature and pressure. While sharing her experiences with friends, she got confused. Help her to identify the correct set of conditions.
a) Low temperature , Low pressure b) High temperature , Low pressure
c) High temperature , High pressure d) Low temperature , High pressure

Q.9 Which condition out of the following would increase the evaporation of water?
a) Increase in temperature of water b) Decrease in temperature of water
c) Less exposed surface area of water d) Adding common salt to water

Q.10 Which of the following does not affect the rate of evaporation?

a) Wind speed b) Temperature

c) Humidity d) Insoluble impurities

Q.11 Evaporation is a _____ phenomenon while boiling is a _____.

a) Bulk , surface b) surface , bulk c) fast , slow d) none

Q.12 During summer, water kept in an earthen pot becomes cool because of the phenomenon of :

a) Diffusion b) Transpiration

c) Osmosis d) Evaporation

Q.13 Which of the following does not undergo sublimation?

a) Ammonium chloride b) Sodium chloride

c) solid carbon dioxide d) Iodine

Q.14 A few substances are arranged in increasing order of Force of Attraction between their particles. Which one of the following represents a correct arrangement?

a) Water , wind air b) Air , sugar , oil

c) Oxygen , water , sugar d) Salt , juice , air

Q.15 Dry ice is stored under _____.

a) High pressure b) Low pressure

c) High temperature d) Low temperature

Fill in the Blanks :

Q.16 Gases can be liquefied by applying _____ and lowering _____.

Q.17 _____ is the heat that is gained or lost when a substance changes from one physical state to another without any change in temperature.

Q.18 Impurities lower the _____ point but raise the _____ point.

Q.19 The process of converting a liquid into solid is called _____ while the process of converting a gas into liquid is called _____.

Q.20 Evaporation of a liquid at a room temperature leads to _____ effect.

Q.21 _____ is the change of gaseous state directly to solid state without going through the _____ state.

Match The Following Questions :

Q.22 Match column I and column II

	Column I		Column II
A.	Solid – Gas	I.	Condensation
B.	Liquid – Gas	II.	Solidification
C.	Gas – Liquid	III.	Sublimation
D.	Liquid – Solid	IV.	Evaporation

Q.23 Match column I and column II

Column I		Column II	
A.	Latent heat of Fusion	I.	22.59×10^5 J /kg.
B.	Latent heat of vaporization	II.	10.93×10^5 J /kg.
		III.	3.347×10^5 J /kg.

Answer The Following Questions :

Q.24 Convert the following temperature into Celsius scale:
(a) 300 K (b) 573 K

Q.25 Convert the following temperature into Kelvin scale:
(a) 25℃ (b) 100℃

Q.26 What is the physical state of the following :
(a) 250℃ (b) 100℃ (c) 25℃ (d) 0℃.

Q.27 What types of clothes should we wear in summer?

Q.28 Why does our palm feel cool when we put some acetone or petrol or perfume on it?

Q.29 For any substance, why does the temperature remain constant during the change of state?

Q.30 What produces more severe burns, boiling water or steam?

Q.31 Explain how the rate of evaporation of a liquid is affected with :
(i) Increase in temperature.
(ii) Decrease in exposed surface area.
(iii) Increase in moisture in the surrounding air.
(iv) Increase in wind speed.

Q.32 Draw the 'states of matter triangle' to show the interconversion of states of matter.

Answers

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

16. Pressure , Temperature
17. Latent Heat
18. Melting point , Boiling
19. Solidification , condensation
20. Cooling
21. Sublimation , Liquid
22. A – III ; B – IV ; C – I ; D – II
23. A – III ; B – I