States of Matter

1. Fill in the blanks.

a. The change from solid into gas is called ……

b. The color of gaseous Iodine is ……....

c. …….. is an example for deposition.

2. What is the reverse process of evaporation? Give one example.

Elements

3. Fill in the blanks.

	Name	Symbol
a.	Iron	.....
b.	Sodium	.....
c.	Silver	.....
d.	.....	P
e.	.....	Cu
f.	.....	Si

4. Write three differences between metals and nonmetals.

5. Write the names and symbols of two liquid and two gaseous elements.

6. Classify the following elements as either monoatomic or diatomic.

Copper: Oxygen:

Carbon: Gold:

Iodine: Hydrogen:

Phosphorus: Magnesium:

Compounds

7. Write any two properties of compounds.

8. Chlorine is a poisonous gas and table salt contains Chlorine. However table salt (NaCl) is not poisonous. Why?

Mixtures

1. Classify the following as homogeneous or heterogeneous mixture.

a. sand − water **b.** air

c. salt – sugar **d.** alcohol – water

e. salt − water **f.** gasoline − water

2. Answer the following questions for Fe, S, NaCl, Sea water, Ice, Milk and Oil−Water.

a. Which ones are homogeneous?

.....

b. Which ones are pure?

.....

c. Which one is not uniform?

.....

d. Which one is emulsion?

.....

Physical and Chemical Change

3. Determine the following changes whether they are physical or chemical.

a. Melting of ice **b.** Rusting of iron

c. Burning of coal **d.** Formation of snow

e. Cutting of wood **f.** Digestion of food

4. We cannot separate Iron powder-Sulfur mixture anymore by a magnet after heating. Why?

Density

5. How does a ship float?

6. Which one has a greater density; 1 g of Water or 1 kg of Water? Why?

7. A piece of Iron with the volume of 10 cm^3 weighs 79 grams. What is the density of Iron metal?

8. The density of Gold is 19.3 g/cm^3. What is the mass of a cube of Gold in grams if a side of this cube is 3 cm?

Melting and Boiling Points

1. Fill in the blanks.

a. Melting point is equal to the ……point of the same substance.

b. Liquids …….. at certain temperatures but they …… at any temperature.

c. Elements and Compounds melt and boil at definite temperatures because they are pure substances.

But …… don't have certain melting and boiling points because they are impure substances.

2.

Substance	m.p (^{0}C)	b.p (^{0}C)
X	40	142
Y	−4	110
Z	12	130

a. At room temperature (25 ^{0}C), what are the physical states of X, Y, and Z?

b. Can X be a mixture? Why?

3. Choose the substances that have a definite boiling point.

a. Iron **b.** Sulfur **c.** HCl

d. Salty water **e.** CO_2 **f.** Oil−Water

Solubility

4. Classify the following substances as either **soluble** or **insoluble** in water.

a. Sugar **b.** Gasoline

c. Sand **d.** Alcohol

5. Fill in the blanks.

a. ..... is the amount of substance that dissolves in a given solvent at a certain temperature.

b. ……. is a substance that dissolves in a solution. For example; ……. in salty water.

Separation of Compounds and Mixtures

6. Which of the following can be separated into simpler parts by physical methods?

a) Copper **b)** Phosphorous **c)** NaCl

d) Alcohol−Water **e)** Oil−Water **f)** CO_2

7. How can you separate the mixture of

a. Oil–Water **b.** Sand–Water

c. Alcohol–water **d.** Iron powder–Sugar

8. Sugar dissolves in water whereas naphthalene doesn't. In order to separate a sugar−naphthalene mixture to obtain pure sugar, which of the following processes, and, in which sequence, must be followed?

I. Evaporation
II. Dissolution in water
III. Filtration