Section B [Chemistry] - Practice Paper 1 NAME:……

Question 1 Multiple choice questions [10 marks]

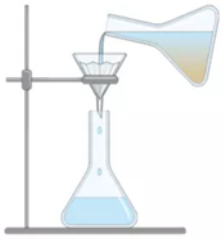
Circle the correct answer.

1. Which of the following gases is an air pollutant?

A.	B.	C.	D.
Oxygen	Nitrogen	CFCs	Argon

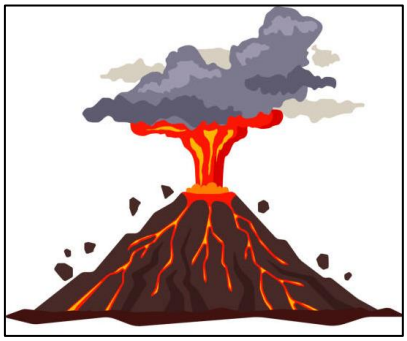
2. During filtration, how do we call the liquid which passes through the filter paper?

A.	Residue
B.	Filtrate
C.	Solvent
D.	Particles

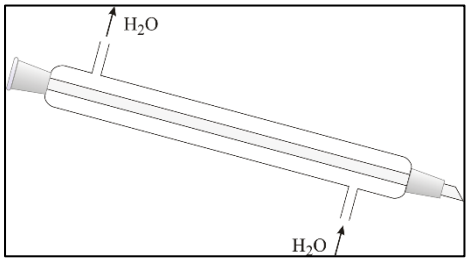


3. Volcanic activities release _____ gas in large amount in the atmosphere.

A.	sulfur dioxide
B.	nitrogen dioxide
C.	oxygen
D.	nitrogen



4. What is the name given to the equipment shown below?



A. Funnel B. Condenser C. Beaker D. Conical flask

5. What is the chemical formula for hydrochloric acid?

A. H_2SO_4 B. HCl C. HNO_3 D. H_2O

6. Which separation technique shown below is used separate a mixture of iron fillings and sulfur powder?

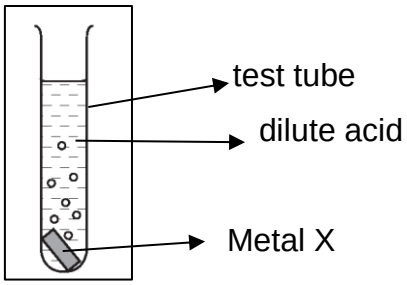
A.	B.	C.	D.
Magnetic attraction	Filtration	Hand sorting	Sublimation

7. Sublimation is the process by which a solid changes directly to a _____ on heating.

A.	B.	C.	D.
gas	liquid	molten	aqueous

8. Metal X is placed in a test tube containing dilute sulfuric acid. What could be metal X?

A. Silver
B. Copper
C. Zinc
D. Gold



9. Which of the following is a compound?

A. Seawater B. Air C. Bromine D. Magnesium chloride

10. Which of the following elements is a liquid at room temperature?

A. Sulfur B. Copper C. Bromine D. Magnesium

Question 2 **[8 marks]**

a) Study the table and identify the physical and the chemical changes. Tick the appropriate column for each. [4]

	Physical change	Chemical change
Burning of wood		
Melting of wax		
Photosynthesis		
Freezing water		

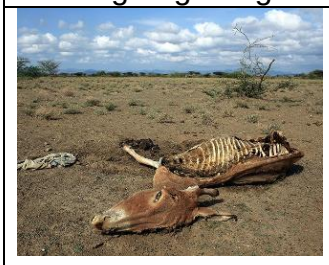
Match the following compounds with their correct chemical formulae. [4]

Hydrochloric acid	HNO_3
Sodium hydroxide	H_2SO_4
Nitric acid	HCl
Sulfuric acid	NaOH

Question 3 **[4 marks]**

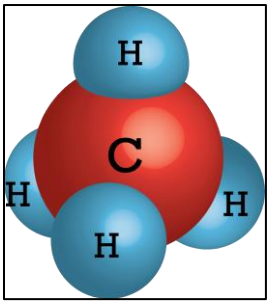
Which of the two greenhouse gases, **methane** or **carbon dioxide**, is produced in the following activities?

One has been done for you.

Activity description	**Greenhouse gas produced**
 Burning of fossil fuel in motor vehicles	Carbon dioxide
 Animal breeding	……
 Burning of garbage	……
 Decay of dead animals	……
 Burning of fossil fuels in power stations	……

Question 4 **[6 marks]**

A molecule of methane has the following structure.



(a) What do you understand by the term molecule?

……

……

(b) Identify the elements present in methane.

…….. and ……

(c) Write the chemical formula for methane.

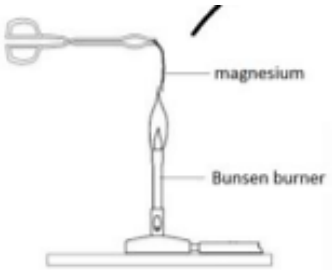
……

(d) Count the total number of atoms in one methane molecule.

……

Question 5 **[6 marks]**

A piece of magnesium ribbon is burnt in a Bunsen flame.



(a) Describe the appearance of the magnesium ribbon before burning.

……..[1]

(b) Give two observations when magnesium burns in oxygen (air).

……..[1]

……..[1]

(c) Describe the appearance of the product formed when magnesium burns in oxygen (air).

……..[1]

(d) i) Complete the word equation for this reaction.

Magnesium + ……. ⟶ Magnesium oxide [1]

ii) Balance the chemical equation for the reaction.

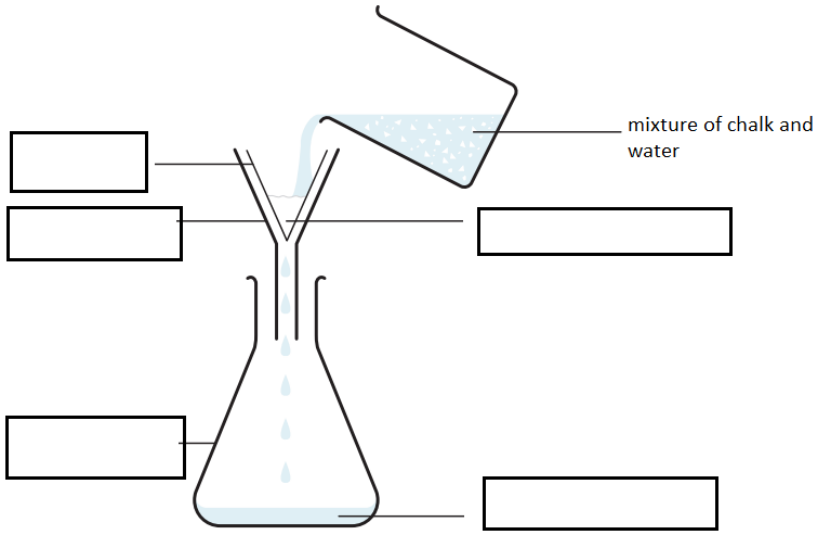
☐ Mg + ☐ O_2 ⟶ ☐ MgO [1]

Question 6 **[8 marks]**

The figure below illustrates the separation technique used to obtain clear water from a mixture of chalk powder and water.

(i) Label the figure using the appropriate word from the list.

conical flask **residue** **filtrate** **beaker** **filter paper** **funnel**



(ii) Name the separation technique shown in the figure.

…….. [1]

(ii) Explain why chalk powder can be separated from the mixture using this method?

……
……[2]

Question 7 **[8 marks]**

(a) Match the compounds with the correct chemical formulae. [5]

Sodium chloride	$AlCl_3$
Calcium oxide	MgO
Zinc chloride	NaCl
Aluminium chloride	CaO
Magnesium oxide	$ZnCl_2$

(b) Complete the following word equations for:

i) Photosynthesis.

Carbon dioxide + ……. ⟶ ……+ glucose

[2]

ii) Respiration.

Oxygen + ……. ⟶ carbon dioxide + water

[1]