

**Question 1 Multiple choice questions****[10 marks]**

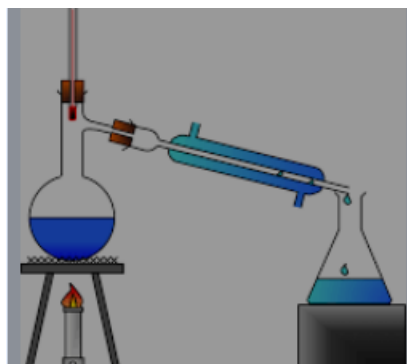
Circle the one that you consider as the correct answer.

1. Which of the following elements is a non-metal?

- A. Calcium                  B. Silver                  C. Gold                  D. Carbon

2. Which separation technique is shown in the Figure below?

A.	Filtration
B.	Decantation
C.	Distillation
D.	Sublimation



3. Which of the following mixtures is a suspension?

- A. Chalk powder and water
- 
- B. Sugar and water
- 
- C. Copper (II) sulfate and water
- 
- D. Sodium chloride and water

4. Which of the following substances sublimes on heating?

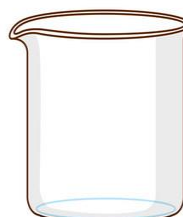
- A. Fluorine                  B. Iodine                  C. Bromine                  D. Chlorine

5. Which of the following gases is a greenhouse gas?

- A. Nitrogen                  B. Argon                  C. Methane                  D. Oxygen

6. What is the name of the equipment shown below?

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



7. An example of a solvent is .....

- A. water
- B. salt
- C. sugar
- D. mud

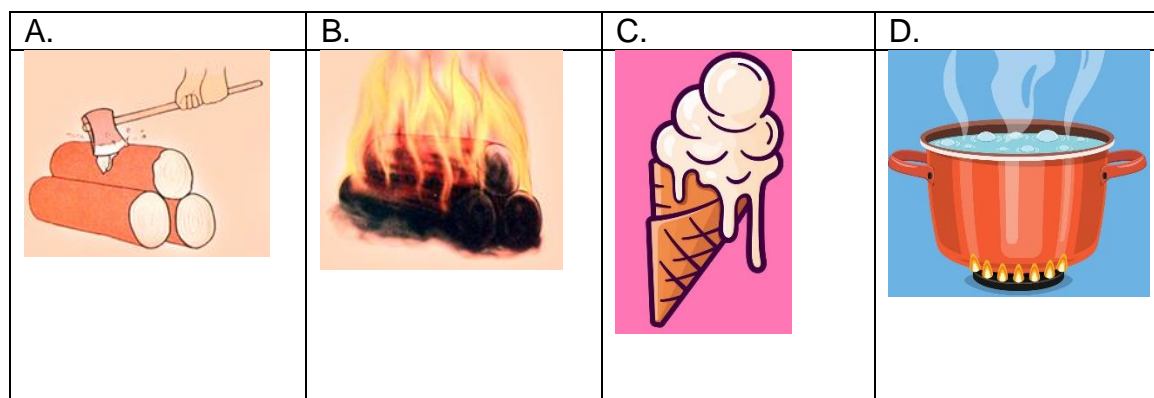
8. Which one of the following is the correct formula for water?

- A.  $H_2O$
- B.  $H_2O_2$
- C.  $HO_2$
- D.  $OH$

9. The symbol for sodium is .....

- A. NA
- B.  $Na_2$
- C. Na
- D. AN

10. Which one of the following pictures shows a chemical change?



## **Question 2**

**[5 marks]**

State whether the following statements are **True** or **False**.

The first one has been done for you.

1. Seawater is an example of a mixture. **True**
2. Sodium chloride is the common name for kitchen salt. ....
3. Glucose is the food produced by plants during photosynthesis. ....
4. Decay of dead animals produce methane gas. ....
5. All elements are arranged in a special chart called Periodic Table. ....
6. Nitrogen is a toxic gas. ....

**Question 3****[11 marks]**

- (a) Complete the table below by filling the missing information about the given elements. [7]

Element	Symbol	Valency
Magnesium		2
Hydrogen		
	Fe	2 or 3
	Na	1
Aluminium		

- (b) Tick the appropriate column to identify **compounds and mixtures**. [4]

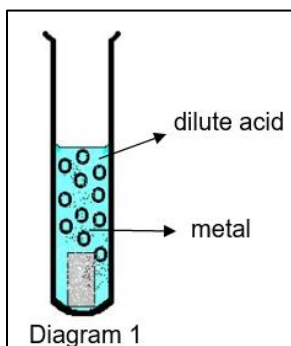
The first one has been done for you.

	Compound	Mixture
<b>Seawater</b>		√
Fruit salad		
Magnesium bromide		
Muddy water		
Carbon dioxide		

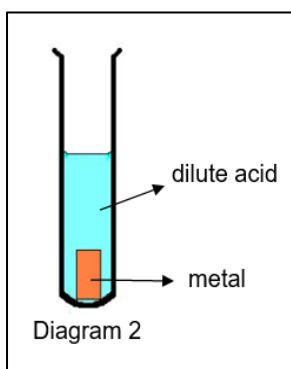
**Question 4**

**[6 marks]**

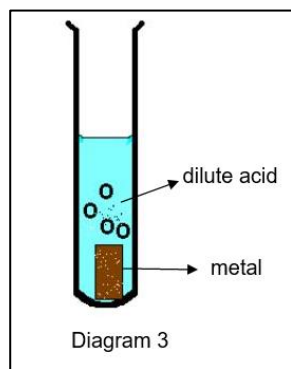
(a) Match the diagrams showing the reaction between a piece of metal and dilute hydrochloric acid with the correct observations.



Iron metal added to dilute acid, few bubbles of gas formed.



Magnesium metal added to dilute acid to form lots of bubbles of gas



No bubbles of gas are formed when copper metal is added to dilute acid.

[3]

(b) i) Write the word equation for the reaction between calcium and oxygen.

.....

ii) Write the balanced chemical equation for the reaction between calcium and oxygen.

.....

[3]

**Question 5**

**[10 marks]**

Air is a mixture of gases.

(a) Name the main gases present in pure air.

.....  
.....[2]

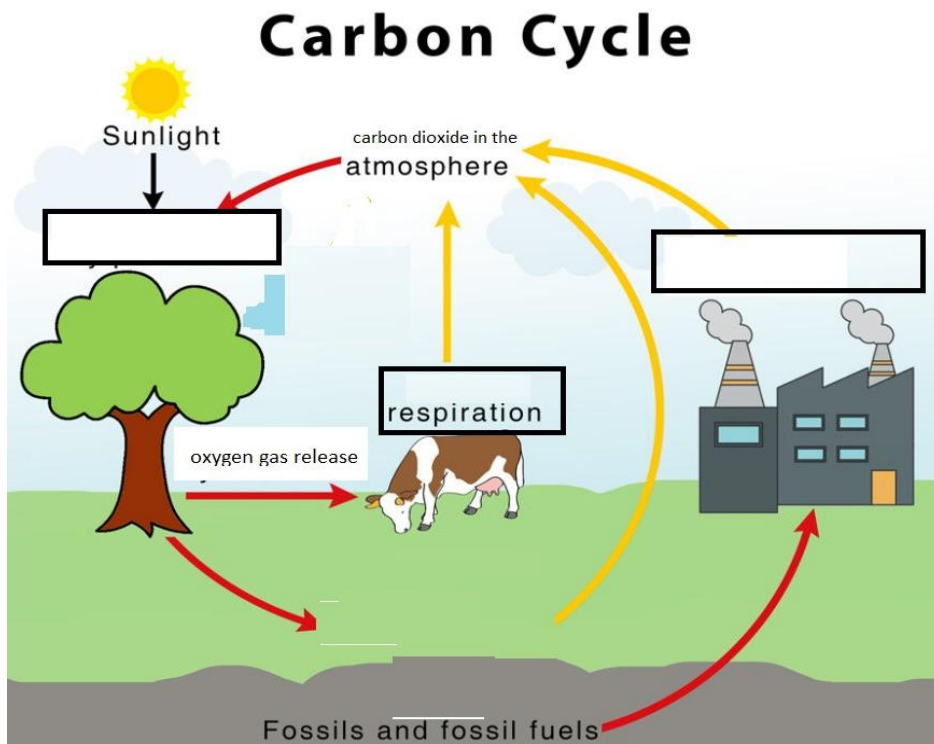
(b) Name the gas which condenses easily at room temperature.

.....[1]

(c) Three natural processes occur in the carbon cycle.

Figure 2 represents the carbon cycle. Write down the processes occurring in the carbon cycle in the boxes.

One of these processes is respiration as shown below.



[2]

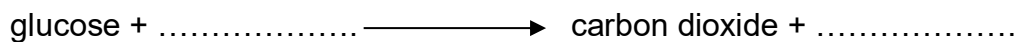
(b) Which gas is released in the air during respiration by plants and animals?

..... [1]

(c) Which gas is absorbed during respiration by plants and animals?

..... [1]

(d) Complete the word equation below for the process of respiration.



[2]

(e) State another name for combustion.

.....

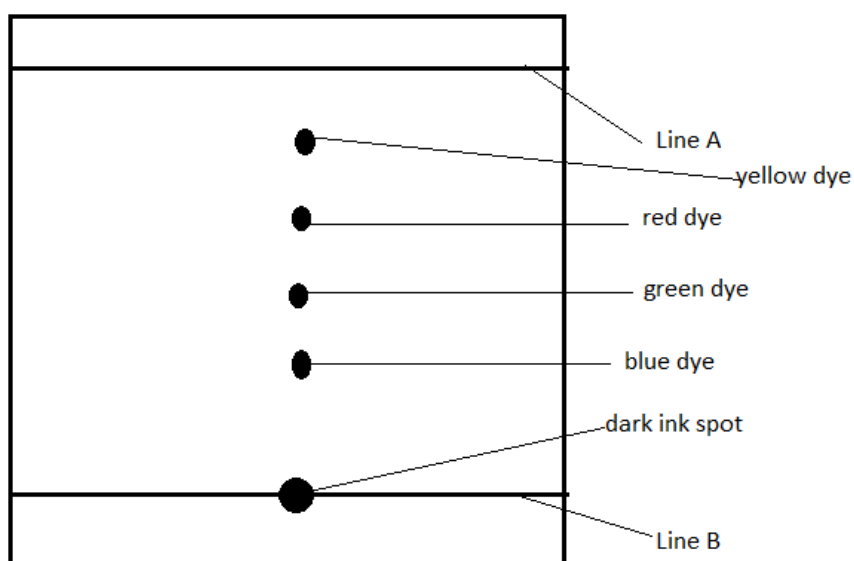
[1]

**Question 6**

**[5 marks]**

In a science laboratory, a group of students perform a black ink paper chromatography experiment.

(a) Diagram 1 below shows the result obtained after performing the experiment.



Label the lines A and B.

Line A .....

Line B .....

[2]

(a) Which dye is most soluble in the solvent?

..... [1]

(b) Why we need to draw line B with a pencil and not with a pen?

..... [2]