

Class-VII
Mid Term (2025-2026)
Subject: CHEMISTRY
Set: A(Marking Scheme)

Maximum marks:20

General Instructions :

- i) All questions are compulsory.
- ii) Question 1 and 2 carry 1 mark for each sub part.
- iii) Question 3 and 4 carries 2 marks.
- iv) Question 5 carries 3 marks.
- v) Question 6 carries 5 marks.
- vi) Question 7 carries 4 marks(Case Based)

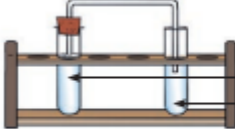
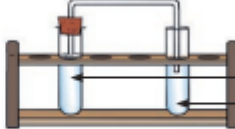
Q. No	Questions	Marks
1	Choose the correct option for the following: (i) Which of the following statements are the characteristics of a physical change? (i) The state of the substance may or may not change. (ii) A substance with different properties is formed. (iii) No new substance is formed. (iv) The substance undergoes a chemical reaction (a) (i) and (ii) (b) (ii) and (iii) (c) (i) and (iii) (d) (iii) and (iv) (ii) A solution turns the red litmus paper to blue. Excess addition of which of the following solutions would reverse the change? (a) Lime water (b) Baking soda (c) Vinegar (d) Common salt solution (iii) You are provided with three unknown solutions labelled A, B, and C, but you do not know which of these are acidic, basic, or neutral. Upon adding a few drops of red litmus solution to solution A, it turns blue. When a few drops of turmeric solution are added to solution B, it turns red. Finally, after adding a few drops of red rose extract to solution C, it turns green. Based on the observations, which of the following is the correct sequence for the nature of solutions A, B, and C? (i) Acidic, acidic, and acidic (ii) Neutral, basic, and basic (iii) Basic, basic, and acidic	1 1 1
2		

	(iv) Basic, basic, and basic Read the Assertion and Reason statement carefully and mark the correct option out of the following options: a) If both assertion and reason are true and the reason is the correct explanation of the assertion. b) If both the assertion and reason are true but the reason is not the correct explanation of the assertion. c) If assertion is true but reason is false d) If both assertion and reason are false. Assertion: Rusting of an iron nail is a chemical change . Reason: It does not involve the formation of a new substance. Ans. c	1									
3	Differentiate between acids and bases by giving any two points of difference for each. Ans. <table><tr><td>ACIDS</td><td>BASES</td></tr><tr><td>Sour to taste</td><td>Bitter to taste</td></tr><tr><td>Non soapy to touch</td><td>Soapy to touch</td></tr><tr><td>Turns blue litmus to red</td><td>Turns red litmus to blue</td></tr></table> OR How can you obtain red rose extract to be used as an acid-base indicator from rose flowers? Mention the steps in brief. Ans. Take a fistful of the collected petals of red roses and wash them with water. Crush the petals using a mortar and pestle. Place them in a glass tumbler. Pour some hot water into the glass tumbler to ensure that the crushed flower petals are completely immersed. Cover the glass tumbler with a lid. Wait for 5 – 10 minutes till the water becomes coloured and filter it. The filtrate is the required flower extract to be used as an acid-base indicator.	ACIDS	BASES	Sour to taste	Bitter to taste	Non soapy to touch	Soapy to touch	Turns blue litmus to red	Turns red litmus to blue	2	
ACIDS	BASES										
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4	Set 1 Complete the table given below: <table><tr><td>S No.</td><td>Name of the sample</td><td>Name of acid present</td></tr><tr><td>1</td><td>Lemon juice</td><td>Citric acid</td></tr><tr><td>2</td><td>Raw mango</td><td>Tartaric acid</td></tr></table>	S No.	Name of the sample	Name of acid present	1	Lemon juice	Citric acid	2	Raw mango	Tartaric acid	2
S No.	Name of the sample	Name of acid present									
1	Lemon juice	Citric acid									
2	Raw mango	Tartaric acid									

3	Tomato	Citric acid and Oxalic acid
	Curd	Lactic acid

Set 2
Complete the table given below:

S No.	Name of the sample	Name of acid present
1	Tamarind	Tartaric acid
2	Vinegar	Acetic acid
3	Amla	Ascorbic acid (Vitamin C) and Citric acid
4	Curd	Lactic acid

5	Three liquids are given to you. One is vinegar, another is lime water , and the third one is sugar solution. Can you identify them by using turmeric paper only? Explain. Ans. Turmeric paper will change to red colour in baking soda solution. On this red turmeric paper, vinegar when added will change it back to yellow while sugar solution will have no effect on both yellow or red turmeric paper.	2+1 =3
6	Study the diagram given below and answer the following questions:  (a)  (b) (i) In which of the above cases ,lime water will turn milky and why? (ii) Which gas is responsible for turning lime water milky? (iii) Write the chemical equation for the above change. (iv) Write any two characteristics of a chemical change. Ans.(i) Lime water will turn milky in case (a) because baking soda reacts with vinegar to form carbon dioxide gas which in turn reacts with lime water to form a new white-coloured substance (calcium carbonate) that is insoluble in water. Therefore, the liquid in the bottle appears milky. (ii) Carbon dioxide $\text{Calcium hydroxide} + \text{Carbon dioxide} \rightarrow \text{Calcium carbonate} + \text{Water}$ $(\text{Lime water}) \qquad \qquad \qquad (\text{Insoluble substance})$ (iii) (iv) Irreversible, new substance/ s are always formed. OR	2+1+ 1+1= 5

A small piece of Magnesium ribbon was heated in flame . It was observed that it starts burning with flame and leaves residue after burning.



2+1
+2
=5

(i) What is the colour of the residue left after burning of Magnesium ribbon? Write its chemical name.

(ii) Write the chemical equation involved in the above change.

(iii) Define the term Combustion. Name any two solid combustible substances.

Ans. (i) White, Magnesium oxide

(ii)

The burning of magnesium ribbon can be represented as—

$$\begin{array}{ccccc} \text{Magnesium} & + & \text{Oxygen} & \rightarrow & \text{Magnesium oxide} & + & \text{Heat} & + & \text{Light} \\ \text{(Ribbon)} & & \text{(Air)} & & \text{(White powder)} & & & & \end{array}$$

(iii) A chemical reaction in which a substance reacts with oxygen and produces heat and/or light is called combustion. For example, wood, paper, cotton, etc.

Read the passage given below and answer the following questions:

7. On the Farmer's Portal (an online platform from the Department of Agriculture, Cooperation and Farmers Welfare), a query from a farmer states, "My plants are not growing well lately". After a detailed discussion, it was found that the excessive use of chemical fertilisers, pesticides, waste water coming from the industries etc are responsible for this. Immediate remedies were decided to treat the soil.

(a) How can we treat acidic soil?

Ans. By adding lime or lime water.

(b) Organic matter is added if soil is too basic. Give a reason.

Ans. Organic matter releases acids that neutralise the basic nature of the soil.

(c) What happens when an acidic substance is mixed with a basic substance? Give a general reaction for the same.

Ans. Such reactions are called neutralisation reactions. In a neutralisation reaction, salt and water are formed with the evolution (i.e., release) of heat.

Acid + Base $\rightarrow$ Salt + Water + Heat

OR

(c) What are acid base indicators? Give any two examples for the same.

1+1
+2
=4

	Ans. Substances that show different colours in acidic and basic solutions are called acid-base indicators. Egs. Extracts of lichen, red rose, red hibiscus, purple cabbage, etc.	
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