



**ST. VIVEKANAND MILLENNIUM SCHOOL**  
**HMT Township, Pinjore**  
**Term I Examination, November 2025**

**Subject: Science (Chemistry)**

**Set-II**

**Class: X C**

**Time allowed: 03 hours**

**MM: 35**

**Section – A**

1x5=5

**(Multiple Choice Questions)**

1. Four solutions – a, b, and c measured the pH values of water, lemon juice and sodium bicarbonate solution. Which is the correct decreasing order of pH values: 1
  - (a) Water > lemon juice > sodium bicarbonate
  - (b) Lemon juice > water > sodium bicarbonate
  - (c) sodium bicarbonate > water > lemon juice
  - (d) water > sodium bicarbonate > lemon juice
2. Which of the following statements about the reaction given below is incorrect 1
$$2 \text{PbO (s)} + \text{C (s)} \rightarrow \text{Pb (s)} + \text{CO}_2 \text{ (g)}$$
  - (a) Lead is getting reduced
  - (b) Carbon dioxide is getting oxidized
  - (c) Carbon is getting oxidized
  - (d) Lead oxide is getting reduced
3. When dilute hydrochloric acid is added to granulated zinc placed in a test tube, the observation made is 1
  - (a) The surface of metal turns shiny
  - (b) The reaction mixture turns milky
  - (c) A colourless and odourless hydrogen gas evolves with bubbles
  - (d) Odour of chlorine is observed

Choose the correct option for Q. no 4 and 5:

(a) Both A and R are correct, and R is the correct explanation of A.

(b) Both A and R are correct, but R is not the correct explanation of A.

(c) A is correct, but R is false.

(d) A is false, but R is correct.

4. Assertion (A): Sodium hydrogencarbonate is used as an ingredient in antacids. 1

Reason (R):  $\text{NaHCO}_3$  is a mild noncorrosive basic salt.

5 Assertion (A): Silver chloride turns grey in sunlight. 1

Reason (R): It decomposes into silver and chlorine in sunlight.

**SECTION-B**  
**(2- Mark questions)**

2x3=6

10. Write balanced chemical equation for the reaction that occurs when: 2

(a) Blue coloured copper sulphate crystals are heated

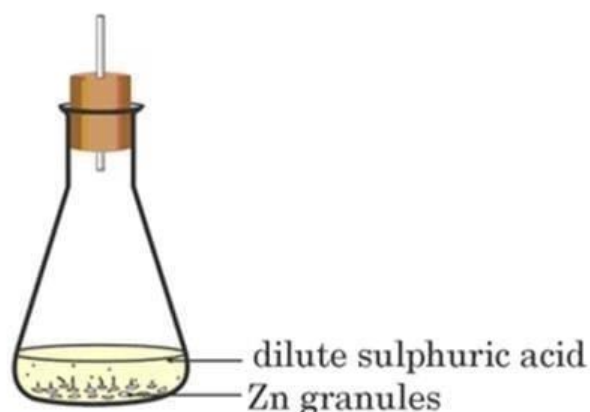
(b) Sodium hydrogen carbonate is heated during cooking.

11 On adding a few drops of universal indicator in three colourless solutions X, Y and Z taken separately in three test tubes, a student observed the changes in colour as green in X, red in Y and blue in Z. 2

(a) Arrange X, Y and Z in increasing order of their pH values.

(b) Which one of the three, X, Y and Z, will change the colour of phenolphthalein? Why?

- 12 A student performs the following experiment in his school laboratory. List two observations to justify that in this experiment a chemical change has taken place. 2



**SECTION-C**  
**(3- Mark questions)**

3x5=15

11. Answer the following : 3
- (a) Write the name given to bases that are highly soluble in water. Give an example.
- (b) How is tooth decay related to pH ? How can it be prevented?
- (c) Why does bee sting cause pain and irritation ? Rubbing of baking soda on the sting area gives relief. How?
12. Name the products formed in each case when 3
- (a) hydrochloric acid reacts with caustic soda.
- (b) granulated zinc reacts with caustic soda.
- (c) carbon dioxide is passed into lime water.
- 13 A chemical compound 'X' is used to bleach washed clothes in laundry as well as to make drinking water free from germs. Identify 'X'. 3

Give Chemical name of the compound ?

Write the method of its preparation along with the chemical equation for the reaction that occurs.

14 Answer the following :

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(i) Define the term decomposition reaction. Write one chemical equation each for decomposition reaction where energy is supplied in the form of heat, light or electricity.

(ii) Decomposition of vegetable matter into compost is considered an exothermic reaction. Why ?

OR

(b) Why are decomposition reactions called the opposite of combination reactions ? Write one chemical equation each for these two types of reactions mentioning the name of the reactant(s) and the product(s) involved in the reactions.

15 Answer the following :

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a. . Name a non-metal which is lustrous and a metal which is non-lustrous.

b. Name the metals which melts when kept on palm.

c. Why is sodium kept immersed in kerosene oil?

**SECTION-D**  
**(4- Mark questions)**

4x1=4

13. Seawater contains many salts dissolved in it. Common salt is separated from these salts. Deposits of solid salt are also found in several parts of the world. These large crystals are often brown due to impurities. This is called rock salt and is mined

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like coal. The common salt is an important raw material for chemicals of daily use.

(a) Write balanced chemical equations to show the products formed during electrolysis of brine.

(b) List two uses of any one product obtained during electrolysis of brine.

(c) (i) A mild non-corrosive basic salt 'A', used for faster cooking, is strongly heated to produce a compound 'B', that is used for removing permanent hardness of water. Identify A and B and also write the equation for the reaction that occurs when A is heated.

**OR**

(c) (ii) Define water of crystallisation. Give two examples of salts that have water of crystallisation.

**SECTION-E**

5x1=5

**(5- Mark questions)**

14. (a) Write the name given to bases that are highly soluble in water. Give an example. 1+2+2

(b) How is tooth decay related to pH ? How can it be prevented?

(c) Why does bee sting cause pain and irritation ? Rubbing of baking soda on the sting area gives relief. How?