

SECTION-A (carries 10 marks)

1. Write the elements whose symbols are Ag, Ar, Au, B, (1)
2. Write down the formula of Aluminium oxide and ammonium sulphate.(2)
3. The valency of Zn is 2 . what is the valency of other elements in each formula?

a) ZnO    b) ZnCl<sub>2</sub>    c) Zn<sub>3</sub>N<sub>2</sub>    d) ZnBr<sub>2</sub> (2)

4. The valency of hydrogen in H<sub>2</sub>O is 1. What is the valency of magnesium in MgO (1)

5. Write down the name of a) CrO<sub>4</sub><sup>2-</sup>    b) NH<sub>4</sub><sup>+</sup>    c) NO<sub>2</sub><sup>-</sup> (2)
- d) Fe<sup>3+</sup>

6. Write down the name of the following compounds (2)

a) NaHCO<sub>3</sub>    b) FeSO<sub>4</sub>    c) H<sub>2</sub>SO<sub>4</sub>    d) H<sub>2</sub>CO<sub>3</sub>

II Section B (carries 20 marks)

1. Write which of the following reactions are possible?
  - a) Copper reacts with acids liberating hydrogen
  - b) Zinc displaces copper from copper sulphate solution.
  - c) Silver displaces iron from ferrous sulphate solution.
  - d) Iron displaces copper from copper sulphate solution. (2)

2. Classify the following reactions as: combination, decomposition, displacement, precipitation or neutralization.



(2<sup>1</sup>/<sub>2</sub>)

3. How will you obtain ?

a) Silver Chloride from silver nitrate.

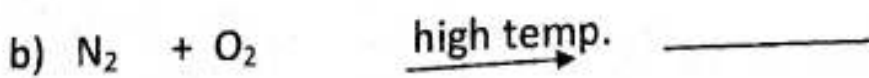
b) Ammonium chloride from ammonia

c) Zinc sulphate from zinc

d) Hydrogen from sodium metal

(5)

4. Complete and balance the equation.



(5)

5. What are oxides ? Give two examples of each of the following oxides .

(3)

a) Basic oxides    b) Acidic oxides    c) Amphoteric oxides    d) Neutral oxides

6. What do you observe when Iron nail is kept in copper sulphate solution for some time?

(2)

7. Wasp sting is treated with vinegar. Give reason.

(1/2)

III Section 3 (Carries 20 marks)

1. Fill in the blanks

a) At 4°C, the density of water is \_\_\_\_\_

b) Boiling point of water is \_\_\_\_\_ Kelvin.

c) The boiling point of water is \_\_\_\_\_ with a decrease in pressure.

d) The chemical formula of green vitriol is \_\_\_\_\_

e) Solubility of gases decreases with an \_\_\_\_\_ in temperature.

(5)

II Name the following

1. Two hygroscopic substances

2. Two deliquescent substances

3. Two efflorescence substances

4. Two colloids

5. Two hydrated substances

(5)

III Answer the following

1. Why does ice float on water?

(2)

2. Drinking water loses its taste on boiling. Give reason.

(2)

3. Explain the anomalous behaviour of water.

(2)

4. Differentiate between solution and suspension (4 points)

(2)

5. Explain with equation what happens when a piece of sodium is put in cold water?

(2)



IV

Section 4(Carries 30 marks)

1. Study the given equation.  $H_2 + Cl_2 \longrightarrow 2HCl$

- What is the product obtained when hydrogen gas is combined with chlorine gas?
- What are the conditions required for the reaction?
- What do you observe in this reaction?
- What is the name given to the reactions that take place in presence of sunlight?
- Mention the colour of hydrogen gas and chlorine gas. (5)

2. Study the reaction given.  $CuO + H_2 \longrightarrow Cu + H_2O$

- $CuO$  is converted to  $Cu$ . What is this reaction called?
- Oxygen is added to hydrogen in the formation of water. What is this reaction called?
- Which substance is oxidized?
- Which substance is reduced?
- Which is the oxidising agent?
- Which is the reducing agent? (3)

3. Give reason.

- Hydrogen is useful in welding.
- Nitric acid is not used for the preparation of hydrogen gas.
- Hydrogen gas act as a reducing agent. (3)

4. What happens when ;

- Steam is passed over red-hot iron.
- Zinc metal is reacted with concentrated solution of sodium hydroxide. (3)

5. Name the following;

- The process of hardening vegetable oil.
- The product when hydrogen burns in air.
- A hydrogen based fuel. (3)

6. Explain the preparation of hydrogen gas in laboratory along with diagram. And also (5+5)

Answer the following questions

- a) Zinc granules are used for this reaction.why?
- b) Name the catalyst used in this reaction.
- c) Hydrogen cannot be prepared by downward displacement of air.why? (3)

XX