

## CHEMISTRY

M.M:25

### QI. Tick the right answer:

- Which among the following statement(s) is(are) true? 'Exposure of silver chloride to sunlight for a long duration turns grey due to:  
(i) The formation of silver by decomposition of silver chloride.  
(ii) Sublimation of silver chloride.  
(iii) Decomposition of chlorine gas from silver chloride.  
(iv) Oxidation of silver chloride  
a) (i) only                      b) (i) and (iii)  
c) (ii) and (iii)                d) (iv) only
- Calcium phosphate is present in tooth enamel. Its nature is:  
a) Basic                          b) acidic  
c) neutral                        d) amphoteric
- Which of the following alloy will contain mercury as its constituents?  
a) Stainless steel    b) German silver  
b) Solder                        d) Zinc amalgam
- Which of the following can be used for denaturation of ethanol?  
a) Methyl alcohol    b) Pyridine  
c) Copper sulphate    d) All can be used
- Which of the following molecules have 10 electrons in its central atom after sharing?  
a)  $\text{CH}_4$                           b)  $\text{H}_2\text{S}$   
d)  $\text{CO}_2$                           d)  $\text{SO}_2$
- An element with atomic number 14 is hard form acidic oxide and covalent halide. To which of the following categories does the element belong?  
a) Metal                          b) Non metal  
c) Metalloid                      d) Left-hand side element
- Although metal form basic oxides, which of the following metal will form an amphoteric oxide?  
a) Na                                b) Zn  
c) Ca                                d) Cu
- Which one of the following four metals would be displaced from the solution of its salts by other three metals?  
a) Mg                                b) Cu  
c) Zn                                d) Fe
- Which of the following does not contain water of crystallization?  
a) Blue vitriol                  b) Baking soda  
c) Washing soda                d) Gypsum
- Electrolysis of water is a decomposition reaction. The molar ratio of hydrogen and oxygen gases liberated during electrolysis of water is:  
a) 1:1                                b) 2:1  
c) 4:1                                d) 1:2

### QII. Answer the following questions.

(1X10=10)

1-XI Sc-(Chem)

1. Zinc liberates hydrogen gas with dilute hydrochloric acid whereas copper does not. Explain why?  
\_\_\_\_\_
2. Arrange the following in increasing order of their pH values.  
NaOH solution, blood, lemon juice  
\_\_\_\_\_
3. What happens when a mixture of  $\text{Cu}_2\text{O}$  and  $\text{Cu}_2\text{S}$  is heated?  
\_\_\_\_\_
4. Calcium forms salts Calcium oxide -  $\text{CaO}$  and Calcium chloride -  $\text{CaCl}_2$ . Barium belongs to the same group; Write the formula of hydroxide and sulphate of barium.  
\_\_\_\_\_
5. Chlorine is more electronegative than sulphur. Why?  
\_\_\_\_\_

(1X5=5)

**QIII. Write chemical equations for the following conversions:**

1. Ethanol to Sodium ethoxide.

\_\_\_\_\_

2. Methane to Chloromethane.

\_\_\_\_\_

3. Ethanoic acid to Sodium acetate.

\_\_\_\_\_

4. Ethene to Ethane.

\_\_\_\_\_

5. Ethanol to Ethene.

\_\_\_\_\_

(1X 5=5)

**QIV. Read the information and answer the following questions:**

Dry pellets of 'X' when kept in open absorb moisture and turns sticky. The compound is also formed by chlor-alkali process and is also known as caustic soda.

i) Write chemical name and formula of 'X' ?

---

ii) What happens when 'X' is treated with dilute hydrochloric acid? Write chemical equation.

---

iii) Name the type of reaction when 'X' reacts with dilute hydrochloric acid.

---

iv) Describe chlor-alkali process with chemical reaction.

---

---

v) Why it is recommended that 'acid should be added to water not water to acid' while diluting an acid?

---

---

(1X5=5)