

**Class: X**  
**Subject: Chemistry**  
**Topic: Metals and non-metals**  
**No. of Questions: 20**

1. Define the following terms.

(i) Mineral (ii) Ore (iii) Gangue

2. Mica is mainly,

- A. potassium aluminium silicate.
- B. Calcium aluminium silicate.
- C. Calcium aluminium fluoride.
- D. Calcium magnesium silicate.

3. Electrometallurgical process is employed to extract?

- A. Fe
- B. Pb
- C. Na
- D. Ag

4. What are washing soda and baking soda chemically?

5. Which gas is produced when dilute hydrochloric acid is added to a reactive metal? Write the chemical reaction when iron reacts with dilute  $H_2SO_4$ .

6. Which pair contains species which can react with each other to produce dihydrogen gas?

- A. Sodium amalgam and water
- B. Hydrolith and water
- C. Copper and water
- D. Both (a) and (b).

7. What is not true about roasting?

- A. to convert sulphides into oxides
- B. to remove volatile impurities
- C. to dry the ore
- D. to convert the ore into fine powder

8. A given non-metal forms sulphuric acid on reacting with concentrated  $\text{HNO}_3$ . Identify the non-metal.
9. What chemical process is used for obtaining a metal from its oxide?
10. The three isotopes of hydrogen differ from one another in
- Atomic number
  - Number of protons
  - Nuclear charge
  - Nuclear mass.
11.  $\text{SO}_2$
- Turns dry blue litmus paper red
  - Turns moist blue litmus paper red
  - Turns moist red litmus paper blue
  - None of these
12. A white powder having an odour of chlorine is used to remove yellowness of white clothes in laundries. Name this powder. How is it prepared? Write the chemical equation for the reaction involved in its preparation.
13. Food cans are coated with tin and not with zinc because
- zinc is costlier than tin.
  - Zinc has a higher melting point than tin.
  - Zinc is more reactive than tin.
  - Zinc is less reactive than tin.
14. Starting with 0.5 mol of sodium peroxide how many moles of dioxygen gas can be obtained by dropping excess of water on it
- 0.5 MOLE
  - 1 MOLE
  - 0.25 MOLE
  - 0.125 MOLE.
15. A non-metal belonging to group V in the periodic table has two major allotropic forms. Name its two forms. Identify the element. Write two distinctions between these two forms.

16. Acidified potassium permanganate is dropped over sodium peroxide in a round bottom flask at room temperature, reaction takes place to produce

- A. hydrogen peroxide
- B. mixture of hydrogen and oxygen
- C. a colourless gas hydrogen
- D. a colourless gas dioxygen.

17. What are amphoteric oxides? Give two examples of amphoteric oxides.

18. An element has two allotropic forms A and B and belongs to group V of the periodic table, A is much darker in colour than B. Ignition temperature of A is  $260^{\circ}\text{C}$  and that of B is  $30^{\circ}\text{C}$ .

What may A and B be? Which one of them reacts with

- (i) chlorine on heating but not in the cold
- (ii) hot concentrated solution of NaOH producing a gas ? Write the chemical equations for the reactions involved.

19. Give reasons

- (a) Platinum, gold and silver are used to make jewellery.
- (b) Sodium, potassium and lithium are stored under oil.

20. Hydrogen at the moment of its generation (newly born hydrogen) is generally called

- A. Protium
- B. Nascent hydrogen
- C. Atomic hydrogen
- D. Heavy hydrogen