INDIAN SCHOOL AL MAABELA

(ISO 9001:2015 CERTIFIED INSTITUTION

Question Bank

CHEMISTRY

Name of the Student:	**Class: X**	**Sec:**	**Roll No:**
Resource Person: Mrs. K.N. VIDHYA	**Question Bank:02**	**Date: 24-08-19**	
Topic/Lesson: Metals and Non- metals			
Reference: Previous years Question paper			

ONE MARK QUESTIONS

1. Which property makes solder alloy suitable for welding?
2. Why do we use gold and platinum metals in jewellary?
3. Show the electronic transfer in formation of $MgCl_2$.
4. Why does calcium float in water?
5. Why do ionic compounds have high melting point?
6. Name two metals which react with dilute HNO_3 to evolve H_2 gas.
7. Why oxides of highly reactive metals cannot be reduced by carbon?

TWO MARK QUESTIONS

8. Differentiate between roasting and calcination.
9. A compound Z is formed by transfer of electrons from the metal X to a non-metal Y. Identify the type of bond formed in the compound. List three properties of compound formed by such type of bonds.
10. What are amphoteric oxides? Give two examples.
11. Zinc does not evolve hydrogen gas on reacting with HNO_3. Why?
12. A metal A which is used in thermite process, when heated with oxygen gives an oxide B which is amphoteric in nature. Identify A and B. write down the reactions of oxide of B with HCl and NaOH.
13. The way, metals like sodium, magnesium and iron react with air and water is an indication of their relative positions in the reactivity series. Is this statement true? Justify answer with example.

THREE MARK QUESTION

14. a. Write the steps involved in the extraction of pure metals in the middle of the activity series from their carbonate ores.

b. How is copper extracted from its sulphide ore? Explain the various steps supported by chemical equations. Draw a labelled diagram for the electrolytic refining of copper.

15. What is cinnabar? How is metal extracted from cinnabar? Explain briefly.
16. A metal forms an oxide having formula M_2O_3. It dissolves bot in dilute sulphuric acid as well as dilute sodium hydroxide solution. Identify the metal and write the equations for the reactions involved.
17. Describe ionic compounds on the basis of following properties:
    i. Strong forces of attraction between positive and negative ions.
    ii. Solubility of compounds in water.
    iii. Electrical conductivity
18. Define the term anode mud. Name an electrode made of pure metal. Give the reaction taking place at cathode and anode during the electrolytic refining of copper.

19. Name two metals which are purified by electrolytic refining. Mention the cathode, anode and electrolyte used the refining process. At which electrode would the pure metal be deposited?

FIVE MARK QUESTIONS

20. I) Show the formation of Na_2O by electron transfer method.
    ii) why are ionic compounds usually hard?
    iii) How is it that ionic compound in the solid state do not conduct electricity but they do so in the molten state?

21. a.. write two differences between calcination and roasting.
    b. No reaction takes place when granules of a solid A is mixed with a powder of solid B. however when the mixture is heated, a reaction starts with the evolution of much heat. Product C of the reaction settles down as a liquid metal and a solid product D keeps on floating over the liquid C. This reaction is sometimes used for making for ready use in odd places.
    1. Based on this information, make assumption about metals A and B and corresponding deductions about C and D and write a balanced chemical equation for the reaction. Include in the chemical equation about the physical states of the reactants and products, need for heating for starting the reaction and the reaction being exothermic.
    2. Name two types of chemical reaction to which this reaction can belong to.

22. a. Distinguish between ionic and covalent compounds under the following properties:
    1. strength of forces between constituting elements.
    2. Solubility of compounds in water.
    3. Electrical conduction in substances.

    b. Explain how the following metals are obtained from their compounds by reduction process:
    1. Metal M is in the middle of the reactivity series.
    2. Metals N which is higher up in the reactivity series. Give one example of each.

23. An ore on treatment with dilute hydrochloric acid produces brisk effervescence. What kind of ore is this? What steps will be required to obtain metal from the enriched ore?