

CHEMISTRY (XII) CHAPTER 2 (s-Block Elements)

Short Questions:

1. Why is the aqueous solution of Na_2CO_3 alkaline in nature?
2. How LiNO_3 and NaNO_3 differ in application of heat. Give corresponding equations.
3. Solution of Na_2O in water is alkaline. Justify the statement.
4. Why 2% gypsum is added into the cement?
5. What happens when:
 - a. Li_2CO_3 is heated
 - b. Na_2CO_3 is heated
6. Give formulae of Natron and Halite.
7. Write two points of difference of Beryllium with its family members.
8. Prove that decomposition of lithium nitrate gives different products than nitrates of other alkali metals?
9. How lime and sand are used to make glass?
10. Why lime is added to acidic soil?
11. What is the action of litmus with aqueous solution of Na_2CO_3 ?
12. What is Plaster of Paris?
13. What is Plaster of Paris? Give its two applications.
14. Why lime water turns milky by passing CO_2 gas but becomes clear with excess of CO_2 ?
15. Why KO_2 is used in breathing equipments used by mountaineers and astronauts?
16. Give four points in which lithium differs from its own family members?
17. Reaction of alkali metal with water is acid-base reaction and not an oxidation-reduction reaction. Justify.
18. Give two major problems that may arise in Nelson's cell.
19. Give advantages of Down's Cell.
20. Why alkali and alkaline earth metals are the most reactive elements of the periodic table?
21. BeO is Amphoteric. Prove it.
22. What is lime water and milk of magnesia?
23. How gypsum is converted into plaster of Paris?
24. What is lime mortar? How is it formed?

LONG QUESTIONS:

1. Discuss the commercial preparation of sodium by Down's cell. What are the advantages of this process?
2. Describe the role of lime in industries.
3. Complete and balance the following equations.
 - a. $\text{Li}_2\text{O} + \text{H}_2\text{O} \longrightarrow$
 - b. $\text{Na}_2\text{O}_2 + \text{H}_2\text{O} \xrightarrow{\text{heat}}$
 - c. $\text{Mg}(\text{OH})_2 \xrightarrow{\text{heat}}$
 - d. $\text{NaNO}_3 \longrightarrow$
4. Describe the role of gypsum in agriculture.
5. Explain Peculiar behaviour of beryllium.
6. Write commercial method for the preparation of NaOH .
7. Show four reactions in which lithium behaves differently from its own group.