

Chemistry Worksheet Class 11 on Chapter 10 The s-Block Elements – Set 1

Q1. Which of the following is most basic?

- (a) CsOH
- (b) RbOH
- (c) KOH
- (d) LiOH

Q2. Lithium shows a diagonal relationship with _____.

- (a) Beryllium
- (b) Magnesium
- (c) Calcium
- (d) None of the above

Q3. Which of the following elements is extracted by Dow's process?

- (a) Sodium
- (b) Magnesium
- (c) Both (a) and (b)
- (d) None of the above

Q4. What is the chemical formula of carnallite?

- (a) $\text{KCl} \cdot \text{MgCl}_2 \cdot 6\text{H}_2\text{O}$
- (b) $\text{Ca}_2\text{B}_6\text{O}_{11} \cdot 2\text{H}_2\text{O}$
- (c) $\text{Ca}_2\text{Mg}_2\text{Si}_6\text{O}_{22}(\text{OH})_2$
- (d) None of the above

Q5. Which of the following compounds is extracted by using Solvay's process?

- (a) Sodium carbonate
- (b) Sodium hydroxide
- (c) Sodium chloride
- (d) None of the above

Q6. Name the element which is invariably bivalent and whose oxide is soluble in excess of sodium hydroxide, and its positive ion has a noble gas configuration.

Q7. Why is magnesium ion much more heavily hydrated than sodium ion?

Q8. Why are halides of beryllium polymeric?

- Q9.** What is the chemical formula of quicklime, slaked lime and lime water?
- Q10.** What is dead burnt plaster? How is it synthesised?
- Q11.** Why does the first element in each group show anomalous properties?
- Q12.** Why is lithium chloride soluble in organic solvents?
- Q13.** Why do we keep sodium metal under kerosene?
- Q14.** Answer the following questions.
(a) Why does beryllium chloride give an acidic solution when dissolved in water?
(b) Why are salts of alkaline earth metals colourless and diamagnetic?
- Q15.** Answer the following questions.
(a) Why is lithium iodide less stable than caesium iodide?
(b) Differentiate the structure of calcium hydride and beryllium hydride.
- Q16.** What happens when sodium dioxide reacts with water? Write the balanced chemical equation for the reaction.
- Q17.** What happens when potassium dioxide reacts with water? Write the balanced chemical equation for the reaction.
- Q18.** What is the oxidation state of
(a) Lithium in Li_2O
(b) Sodium in Na_2O_2
(c) Potassium in KO_2
- Q19.** What is a diagonal relationship? What is its cause?
- Q20.** Discuss evidence to show the diagonal relationship between lithium and magnesium.