

## ECAT Chemistry Chapter 14 Group IIIA & IVA Elements

| Sr | Questions  | Answers Choice   |
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| 1  | The chemical formula of Epson salt is  | A. $\text{MgSO}_4$<br>B. $\text{MgCl}_2$<br>C. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$<br>D. $\text{MgCl}_2 \cdot 7\text{H}_2\text{O}$   |
| 2  | The chemical formula of gypsum is  | A. $\text{CaSO}_4 \cdot 5\text{H}_2\text{O}$<br>B. $\text{CaSO}_4 \cdot 4\text{H}_2\text{O}$<br>C. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$<br>D. None of these   |
| 3  | The oxyacids of phosphorus in which phosphorus has the lowest oxidation state is   | A. Hypophosphorus acid<br>B. Orthophosphorus acid<br>C. Pyrophosphorus acid<br>D. Metaphosphorus acid  |
| 4  | Potassium superoxide has a use in breathing equipment in space crafts. The balanced equation for the reaction is               |  |
| 5  | $\text{LiOH}$ _____ soluble than $\text{NaOH}$   | A. More soluble<br>B. Less soluble<br>C. Equally soluble<br>D. None  |
| 6  | Sodium is manufacture by the electrolysis of fused sodium chloride and not from an aqueous solution of sodium chloride because | A. Sodium chloride does not ionize in the water solution<br>B. Sodium chloride is not soluble in water<br>C. Sodium deposited at the cathode may react with water to form sodium hydroxide<br>D. Electricity does not pass through aqueous $\text{NaCl}$ |
| 7  | The element which has a simple cubic lattice in solid state is   | A. Se<br>B. Te<br>C. Po<br>D. None of these  |
| 8  | The most acidic of the following compounds is  | A. $\text{P}_2\text{O}_3$<br>B. $\text{Sb}_2\text{O}_3$<br>C. $\text{B}_2\text{O}_3$<br>D. $\text{As}_2\text{O}_3$   |
| 9  | Permonosulphuric acid is known as  | A. Marshall's acid<br>B. Carlo's acid<br>C. Sulphuric acid<br>D. None of these   |
| 10 | Which is used in navigational equipments?  | A. B<br>B. Be<br>C. Mg<br>D. Al  |
| 11 | Boric acid cannot be used:   | A. An antiseptic in medicine<br>B. For washing eyes<br>C. In soda bottles<br>D. For enamels and glazes   |
| 12 | Which is an essential constituent of chlorophyll   | A. Be<br>B. Fe<br>C. Mg<br>D. Ca   |
| 13 | Which element among the following belongs to Group IV-A of the periodic table?   | A. Barium<br>B. Iodine<br>C. Lead<br>D. Oxygen   |
| 14 | Some of the elements of a period show similar behavior with the elements of next group in next period this is called           | A. Vertical relationship<br>B. Oblique relationship<br>C. Diagonal relationship<br>D. None   |
| 15 | Hybridized in oxygen is:   | A. sp<br>B. $\text{sp}^2$<br>C. $\text{sp}^3$<br>D. $\text{sp}^3\text{d}$  |

D.  $\text{dsp}^3$

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| 16 | Francium is an element at the bottom of Group I in the Periodic Table. Which one of the following predication is likely to be correct? | A. It will react with water to liberate oxygen<br>B. Its hydroxide will be a strong alkali in water<br>C. Its carbonate will decompose on heating to give carbon dioxide<br>D. Its nitrate on heating will give nitrogen dioxide and oxygen              |
| 17 | Which of the following form normal oxide   | A. K<br>B. Li<br>C. Na<br>D. None  |
| 18 | Density of aluminium is ( $\text{g cm}^{-3}$ ):  | A. B<br>B. Al<br>C. Si<br>D. Ge  |
| 19 | Borax is a common mineral of alkali metal sodium. Its formula is   | A.<br>$\text{Na}_2\text{B}_4\text{O}_7$<br>B.<br>$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$<br>C.<br>$\text{Na}_2\text{B}_3\text{O}_6 \cdot 10\text{H}_2\text{O}$<br>D.<br>$\text{Na}_2\text{B}_4\text{O}_7 \cdot 5\text{H}_2\text{O}$ |
| 20 | The structure of white phosphorus is   | A. Square planar<br>B. Pyramidal<br>C. Tetrahedral<br>D. Trigonal planer   |