

1. Nitrogen dioxide cannot be prepared by heating
(A) KNO_3 (B) AgNO_3 (C) $\text{Pb}(\text{NO}_3)_2$ (D) $\text{Cu}(\text{NO}_3)_2$
2. A metal which is soluble in both water and liquid NH_3 separately -
(A) Cr (B) Mn (C) Ba (D) Al
3. The incorrect statement(s) is/are
(A) Mg cannot form complexes
(B) Be can form complexes due to a very small atomic size
(C) the first ionization potential of Be is higher than that of Mg
(D) Mg forms an alkaline hydroxide while Be forms amphoteric oxides
4. Which of the following statements are false?
(A) BeCl_2 is a linear molecule in the vapour state but it is polymeric form in the solid state
(B) Calcium hydride is called hydrolith.
(C) Carbides of both Be and Ca react with water to form acetylene
(D) Oxides of both Be and Ca are amphoteric.
5. Which of the following are ionic carbides?
(A) CaC_2 (B) Al_4C_3 (C) SiC (D) Be_2C
6. Among MgCl_2 , RbCl , BeCl_2 and LiCl , the compounds with the highest and the lowest % of ionic characters are
(A) MgCl_2 and BeCl_2 (B) RbCl and BeCl_2
(C) BeCl_2 and MgCl_2 (D) RbCl and LiCl
7. $\text{Be}_2\text{C} + \text{H}_2\text{O} \rightarrow \text{BeO} + \text{X}$
 $\text{CaC}_2 + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2 + \text{Y}$; then X and Y are respectively
(A) CH_4 , CH_4 (B) CH_4 , C_2H_6
(C) CH_4 , C_2H_2 (D) C_2H_2 , CH_4
8. Which of the following groups of elements have chemical properties that are most similar
(A) Na, K, Ca (B) Mg, Sr, Ba
(C) Be, Al, Ca (D) Be, Ra, Cs

ANSWER KEY

1. (A) 2. (C) 3. (A) 4. (C, D) 5. (A, D) 6. (B) 7. (C)
8. (B)

A