

S-BLOCK

- A metal on combustion in excess air forms X, X upon hydrolysis with water yields H_2O_2 and O_2 along with another product. The metal is :
(1) Rb (2) Na (3) Mg (4) Li
- Match the following items in column I with the corresponding items in column II.

Column I		Column II	
(i)	$\text{Na}_2\text{CO}_3 \cdot 10 \text{H}_2\text{O}$	(P)	Portland cement ingredient
(ii)	$\text{Mg}(\text{HCO}_3)_2$	(Q)	Castner-Keller process
(iii)	NaOH	(R)	Solvay process
(iv)	$\text{Ca}_3\text{Al}_2\text{O}_6$	(S)	Temporary hardness

- (1) (i)→(C); (ii)→(B); (iii)→(D); (iv)→(A)
 (2) (i)→(C); (ii)→(D); (iii)→(B); (iv)→(A)
 (3) (i)→(D); (ii)→(A); (iii)→(B); (iv)→(C)
 (4) (i)→(B); (ii)→(C); (iii)→(A); (iv)→(D)
- The metal used for making X-ray tube window is :
(1) Mg (2) Na (3) Ca (4) Be
 - The alkaline earth metal nitrate that does not crystallise with water molecules, is :
(1) $\text{Sr}(\text{NO}_3)_2$ (2) $\text{Mg}(\text{NO}_3)_2$
(3) $\text{Ca}(\text{NO}_3)_2$ (4) $\text{Ba}(\text{NO}_3)_2$
 - The metal that forms nitride by reacting directly with N_2 of air, is :
(1) K (2) Cs (3) Li (4) Rb
 - Sodium metal on dissolution in liquid ammonia gives a deep blue solution due to the formation of:
(1) sodium ion-ammonia complex
(2) sodamide
(3) sodium-ammonia complex
(4) ammoniated electrons

- Magnesium powder burns in air to give:
(1) MgO only
(2) MgO and $\text{Mg}(\text{NO}_3)_2$
(3) MgO and Mg_3N_2
(4) $\text{Mg}(\text{NO}_3)_2$ and Mg_3N_2
- A hydrated solid X on heating initially gives a monohydrated compound Y. Y upon heating above 373K leads to an anhydrous white powder Z. X and Z, respectively, are:
(1) Washing soda and soda ash.
(2) Washing soda and dead burnt plaster.
(3) Baking soda and dead burnt plaster.
(4) Baking soda and soda ash.
- The temporary hardness of a water sample is due to compound X. Boiling this sample converts X to compound Y. X and Y, respectively, are :
(1) $\text{Ca}(\text{HCO}_3)_2$ and CaO
(2) $\text{Mg}(\text{HCO}_3)_2$ and MgCO_3
(3) $\text{Mg}(\text{HCO}_3)_2$ and $\text{Mg}(\text{OH})_2$
(4) $\text{Ca}(\text{HCO}_3)_2$ and $\text{Ca}(\text{OH})_2$
- The INCORRECT statement is :
(1) Lithium is least reactive with water among the alkali metals.
(2) LiCl crystallises from aqueous solution as $\text{LiCl} \cdot 2\text{H}_2\text{O}$.
(3) Lithium is the strongest reducing agent among the alkali metals.
(4) LiNO_3 decomposes on heating to give LiNO_2 and O_2 .

