Chapter 3
The s, p and d Block Elements

1. Alkali metals are
(A) strong reducing agent
(B) oxidizing agents
(C) electropositive elements
(D) able lose electrons

2. Find the CORRECT trend for alkaline earth metals.
(A) Atomic size Be < Mg < Ca < Sr
(B) Second ionization energy Be < Mg < Ca < Sr
(C) Hydration enthalpy Sr < Ca < Mg < Be
(D) Density Ca < Mg < Be < Sr

3. Which of the following are treated as primary standard in the volumetric analysis?
(A) Sodium carbonate
(B) Potassium dichromate
(C) Sodium thiosulphate
(D) Sodium chloride

4. Which of the following are the minerals of potassium?
(A) Chile saltpeter
(B) Carnallite
(C) Kainite
(D) Potassium feldspar

5. Which of the following statements are CORRECT?
(A) The main raw material required in Solvay process are sodium chloride and ammonium chloride
(B) $NaHCO_3$ is less soluble in water as compared to NH_4C
(C) The byproduct in Solvay process is calcium chloride
(D) $Na_2CO_3 \times 10H_2O$ is commonly known as washing soda or soda ash

6. Which has lowest and highest first ionisation enthalpy in 3d series?
(A) Sc
(B) Zn
(C) Cu
(D) Cr

7. The pair of ions that have same electronic configuration are
(A) Fe^{2+} and Mn^{2+}
(B) Fe^{2+} and Co^{3+}
(C) $Fe^{3+}$and Co^{3+}
(D) $V^{2+}$and Cr^{3+}

8. Which of the following compounds are expected to show similar colour in aqueous medium?
(A) $VOCl_2$
(B) $FeCl_2$
(C) $CuCl_2$

(D) $MnCl_2$

9. Which of the statements are TRUE?
(A) $K_2Cr_2O_7$ solution in acidic medium is orange
(B) $K_2Cr_2O_7$ solution becomes yellow on increasing the pH beyond 7
(C) On passing H_2S through acidified $K_2Cr_2O_7$ solution, a milky colour is observed
(D) $Na_2Cr_2O_7$ is preferred over $K_2Cr_2O_7$ in volumetric analysis

10. Higher oxidation state are generally found in
(A) fluorine
(B) carbon
(C) nitrogen
(D) oxygen

Answer

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