

8. Among the following series of transition metal ions, the one where all metal ions have $3d^2$ electronic configuration is:
- $Ti^{3+}, V^{2+}, Cr^{3+}, Mn^{4+}$
 - $Ti^+, V^{4+}, Cr^{6+}, Mn^{7+}$
 - $Ti^{4+}, V^{3+}, Cr^{2+}, Mn^{3+}$
 - $Ti^{2+}, V^{3+}, Cr^{4+}, Mn^{5+}$
9. Calomel (Hg_2Cl_2) on reaction with ammonium hydroxide gives
- HgO
 - Hg_2O
 - $NH_2-Hg-Hg-Cl$
 - $HgNH_2Cl$
10. Steel resistant to acid is:
- Carbon steel
 - Molybdenum steel
 - Stainless steel
 - Nickel steel
11. Non-stoichiometric compounds are formed by:
- Alkali metals
 - Transition elements
 - Noble gases
 - More than one of the above elements
12. *d*-block elements generally form:
- Covalent hydrides
 - Metallic hydrides
 - Interstitial hydrides
 - Salt-like hydrides
13. The element present in red blood cells of human blood is:
- Fe
 - Ra
 - Co
 - All of these
14. The element which exhibit both vertical and horizontal similarities are:
- Inert gas elements
 - Representative elements
 - Rare elements
 - Transition elements
15. Which occurs in nature in free state?
- Fe
 - Co
 - Ni
 - Pt
16. H_2S is passed in aqueous solution of to give a white precipitate of ZnS .
- $ZnCl_2$
 - $Zn(NO_3)_2$
 - $(CH_3COO)_2Zn$
 - None of these
17. Which of the following are *d*-block elements but not regarded as transition elements?
- Cu, Ag, Au
 - Zn, Cd, Hg
 - Fe, Co, Ni
 - Ru, Rh, Pd
18. Which is the least soluble in water?

- a) AgCl b) Ag₂S c) AgI d) AgBr
19. Which of the following elements is alloyed with copper to form brass?
a) Bismuth b) Zinc c) Lead d) Antimony
20. When KMnO₄ reacts with acidified FeSO₄ :
a) Only FeSO₄ is oxidized
b) Only KMnO₄ is oxidized
c) FeSO₄ is oxidized and KMnO₄ is reduced
d) None of the above

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