DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth **SUBJECT : CHEMISTRY**
DATE : **DPP NO. : 1**

Topic :-REDOX REACTIONS

1. The correct order of reducing power of halide ions is :
   a) $Cl^- > Br^- > I^- > F^-$
   b) $Cl^- > I^- > Br^- > F^-$
   c) $Br^- > Cl^- > I^- > F^-$
   d) $I^- > Br^- > Cl^- > F^-$

2. The reaction, $3ClO^-(aq) \longrightarrow ClO_3^-(aq) + 2Cl^-(aq)$ is an example of :
   a) Oxidation reaction
   b) Reduction reaction
   c) Disproportionation reaction
   d) Decomposition reaction

3. The ox.no. of S in $Na_2S_4O_6$ is :
   a) + 2.5
   b) +2 and +3 (two S have +2 and other two have +3)
   c) +2 and +3 (three S have +2 and one S has +3)
   d) +5 and 0 (two S have +5 and the other two S have 0)

4. Oxidation is a process which involves :
   a) de-electronation b) Electronation c) Addition of hydrogen d) Addition of metal

5. A student states that heating of limestone is an oxidation process, the reason he gives that an oxide of the metal is produced on heating. Which one is correct?
   a) The statement and reason are true
   b) The statement and reason are wrong
   c) The statement is true but the reason is false
   d) None of the above

6. A sulphur containing species that cannot be an oxidising agent is :
   a) H_2SO_4 b) H_2S c) SO_2 d) H_2SO_3

7. $KMnO_4$ acts as ..... indicator in its redox titrations.
   a) Self b) External c) Internal d) Not an

8. In a reaction between zinc and iodine in which zinc iodide is formed, which is oxidised?
   a) Zinc ions b) Iodide ions c) Zinc atom d) Iodine

9. The best oxidising agent of the oxygen family is:
   a) Tellurium b) Selenium c) Sulphur d) Oxygen

10. The oxidation state of iron in sodium nitroprusside is :

a) +2 b) +1 c) Zero d) +3

11. A compound of Xe and F is found to have 53.3% Xe. Oxidation number of Xe in this compound is :
a) −4 b) Zero c) +4 d) +6

12. Which combination is odd with respect to oxidation numbers of S, Cr, N and H respectively:
a) $H_2SO_5, H_2S_2O_8, H_2SO_4, SF_6$
b) $K_2Cr_2O_7, K_2CrO_4, CrO_5, CrO_2Cl_2$
c) $NH_3, NH_4^+, N_3H, NO_2^-$
d) CaH_2, NaH, LiH, MgH_2

13. 0.2 g of a sample of H_2O_2 required 10 mL of N $KMnO_4$ in a titration in the presence of H_2SO_4. Purity of H_2O_2 is :
a) 25% b) 85% c) 65% d) 95%

14. When $KMnO_4$ as oxidising agent and ultimately forms MnO_4^{2-}, Mn_2O_3 and Mn^{2+}, the number of electrons transferred per mole of $KMnO_4$ each case respectively is :
a) 4, 3, 1, 5 b) 1, 5, 3, 7 c) 1, 3, 4, 5 d) 1, 3, 8, 5

15. Titration of KI with H_2O_2 in presence of acid is a :
a) Clock reaction b) Redox reaction c) Intermolecular redoxd) All of these

16. Oxidation state of nitrogen is incorrectly given for :

Compound	Oxidation state
a) $[Co(NH_3)_5Cl]Cl_2$	−3
b) NH_2OH	−1
c) $(N_2H_5)_2SO_4$	+2
d) Mg_3N_2	−3

17. Fluorine exhibits only −1 oxidation state, while iodine exhibits oxidation states of −1, +1, +3, +5 and +7. This is due to :
a) Fluorine being a gas
b) Available *d*-orbitals in iodine
c) Non-availability of *d*-orbitals in iodine
d) None of the above

18. Elements which generally exhibit multiple oxidation states and whose ions are coloured are known as :
a) Metalloid b) Non-metals c) Metals d) Transition metals

19. The oxidation state of sulphur in sodium tetrathionate ($Na_2S_4O_6$) is
a) 2 b) 0 c) 2.5 d) 3.5

20. Which is strongest oxidising agent?
a) O_3 b) O_2 c) Cl_2 d) F_2