6 CHAPTER

TYPES OF REACTIONS

EXERCISE

Complete the reaction and assign (A), (B), (C), (D) from given types of reactions.

(A) precipitate formation reaction

(B) precipitate dissolution reaction

(C) precipitate exchange reaction

(D) no reaction

Q.1 $Pb(NO_3)_2 + 2NaOH \longrightarrow$ _____

Q.2 $Zn(OH)_2 \downarrow + 2NaOH \longrightarrow$ _____

Q.3 $2Na[Al(OH)_4] + CO_2 \longrightarrow$ _____

Q.4 $CuSO_4 + 2NaOH$ (excess) $\longrightarrow$ _____

Q.5 $Fe(OH)_3 \downarrow + NaOH$ (excess) $\longrightarrow$ _____

Q.6 $Mg(OH)_2 \downarrow + 2HCI \longrightarrow$ _____

Q.7 $Mn(NO_3)_2 + 2NaOH \longrightarrow$ _____

Q.8 $CH_3COOAg \downarrow + HNO_3 \longrightarrow$ _____

Q.9 $Hg(NO_3)_2 + NH_3$ Soln. $\longrightarrow$ _____

Q.10 $Hg_2(NO_3)_2 + NH_3$ Soln. $\longrightarrow$ _____

Q.11 $CaC_2O_4 \downarrow + CH_3COOH \longrightarrow$ _____

Q.12 $BaC_2O_4 \downarrow + 2AcOH \longrightarrow$ _____

Q.13 $Fe(CN)_2 \downarrow + 4KCN \longrightarrow$ _____

Q.14 $SrC_2O_4 \downarrow + 2HCl \longrightarrow$ _____

Q.15 $Fe(CN)_3 \downarrow + KCN \longrightarrow$ _____

Q.16 $CaSO_3 \downarrow + SO_2 + H_2O \longrightarrow$ _____

Q.17 $K_4[Fe(CN)_6] + ZnSO_4 \longrightarrow$ _____

Q.18 $3PbS \downarrow + 8HNO_3$ (dil.) $\longrightarrow$ _____

Q.19 $K_4[Fe(CN)_6] + 2CuSO_4 \longrightarrow$ _____

Q.20 $MnS \downarrow + 2HCl \longrightarrow$ _____

Q.21 $AgCl \downarrow + 2KCN \longrightarrow$ _____

Q.22 $HgS \downarrow + Na_2S \longrightarrow$ _____

Q.23 $CuSO_4 + 2KCN \longrightarrow$ _____

Q.24 $FeS \downarrow + 2HCl \longrightarrow$ _____

Q.25 $Cd(CN)_2 \downarrow + 2KCN \longrightarrow$ _____

Q.26 $2AgF + MgCl_2 \longrightarrow$ _____

Q.27 $Pb(NO_3)_2 + 2KI \longrightarrow$ _____

Q.28 $PbCl_2 \downarrow$ + Hot water $\longrightarrow$ _____

Q.29 $HgI_2 \downarrow + KI \longrightarrow$ _____

Q.30 $AgI \downarrow + 2Na_2S_2O_3 \longrightarrow$ _____

Q.31 $CuSO_4 + 2KI \longrightarrow$ _____

Q.32 $KNO_2 + AgF \longrightarrow$ _____

Q.33 $BaSO_4 \downarrow + Na_2CO_3 \longrightarrow$ _____

Q.34 $FeCl_3 + Na_3PO_4 \longrightarrow$ _____

Q.35 $BaSO_4 \downarrow$ + dil. HCl (excess) $\longrightarrow$ _____

Q.36 $2AgNO_3 + Na_2C_2O_4 \longrightarrow$ _____

Q.37 $2BaCrO_4 \downarrow + 4HCl \longrightarrow$ _____

Q.38 $PbCrO_4 \downarrow$ + 4NaOH (excess) $\longrightarrow$ _____

Q.39 $BaCrO_4 \downarrow + CH_3COOH$ (ex.) $\longrightarrow$ _____

Q.40 $PbCl_2 \downarrow + H_2SO_4 \longrightarrow$ _____

Q.41 $Ba(NO_3)_2 + Na_2SO_4 \longrightarrow$ _____

Q.42 $Pb(NO_3)_2 + H_2SO_4 \longrightarrow$ _____

Q.43 $SrCrO_4 \downarrow$ + 2AcOH(ex) $\longrightarrow$ _____

Q.44 $PbCrO_4 \downarrow$ + AcOH $\longrightarrow$ _____

Q.45 $CaCl_2 + Na_2C_2O_4 \longrightarrow$ _____

Q.46 $CaSO_4 + Pb(NO_3)_2 \longrightarrow$ _____

Q.47 $Cu(OH)_2 \downarrow + 4NH_3$ soln. $\longrightarrow$ _____

Q.48 $BaCO_3 \downarrow + 2HCl \longrightarrow$ _____

Q.49 $AlCl_3$ + 3NaOH (limited) $\longrightarrow$ _____

Q.50 $BaCO_3 \downarrow + CO_2 + H_2O \longrightarrow$ _____

Q.51 $ZnS \downarrow + 2HCl \longrightarrow$ _____

Q.52 $NiCl_2 + 2dmg \xrightarrow{NH_4OH}$ _____

Q.53 $CaCl_2 + Na_2SO_4 \longrightarrow$ _____

Q.54 $BaCO_3 \downarrow + 2AcOH \longrightarrow$ _____

Q.55 $Na_2S_2O_3 + BaCl_2 \longrightarrow$ _____

Q.56 $Ba(AcO)_2 + K_2CrO_4 \longrightarrow$ _____

Q.57 $3AgNO_3 + Na_3PO_4 \longrightarrow$ _____

Q.58 $Ag_2CO_3 \downarrow + 2HCl \longrightarrow$ _____

Q.59 $BaSO_3 \downarrow + H_2SO_4 \longrightarrow$ _____

Q.60 $HgS \downarrow$ + conc. $HNO_3 \longrightarrow$ _____

Q.61 $Sr(AcO)_2 + Ag_2SO_4 \longrightarrow$ _____

Q.62 $Ca(OH)_2 + 2HF \longrightarrow$ _____

Q.63 $Ca(OH)_2 + CO_2 \longrightarrow$ _____

Q.64 $CaSO_3 \downarrow + H_2SO_4 \longrightarrow$ _____

Q.65 $Ca(OH)_2 + SO_2 \longrightarrow$ _____

Q.66 $Na_2SO_3 + BaCl_2 \longrightarrow$ _____

Q.67 $Pb(AcO)_2 + H_2S \longrightarrow$ _____

Q.68 $NaCl + AgNO_3 \longrightarrow$ _____

Q.69 $PbI_2 \downarrow + 2KI \longrightarrow$ _____

Q.70 $PbO_2 + HNO_3$ (dil.) $\longrightarrow$ _____

Q.71 $PbO_2 + HNO_3$ (conc.) $\longrightarrow$ _____

Q.72 $K_2[Cd(CN)_4] + H_2S \longrightarrow$ _____

Q.73 $Pb(AcO)_2 + Na_2CrO_4 \longrightarrow$ _____

Q.74 $NaBr + AgNO_3 \longrightarrow$ _____

Complete the reaction and in the following reactions assign for underlined atom for product of complete hydrolysis at R.T.

(A) If product is oxy acid with -ic suffix.

(B) If product is oxy acid with -ous suffix.

(C) If product are two oxy acids one with -ic suffix and otherone with -ous suffix.

(D) If product is not oxy acid, neither with -ic suffix nor with -ous suffix.

Q.75 $\underline{B}_2O_3 + H_2O \longrightarrow$ _____

Q.76 $\underline{S}O_2 + H_2O \longrightarrow$ _____

Q.77 $\underline{B}F_3 + H_2O \longrightarrow$ _____

Q.78 $\underline{Te}F_6 + H_2O \longrightarrow$ _____

Q.79 $H_4\underline{P}_2O_5 + H_2O \longrightarrow$ _____

Q.80 $\underline{C}O + H_2O \longrightarrow$ _____

Q.81 $\underline{S}O_3 + H_2O \longrightarrow$ _____

Q.82 $H_4\underline{P}_2O_6 + H_2O \longrightarrow$ _____

Q.83 $\underline{B}Cl_3 + H_2O \longrightarrow$ _____

Q.84 $\underline{I}F_7 + H_2O \longrightarrow$ _____

Q.85 $\underline{C}O_2 + H_2O \longrightarrow$ _____

Q.86 $\underline{Cl}_2O + H_2O \longrightarrow$ _____

Q.87 $H_4\underline{P}_2O_7 + H_2O \longrightarrow$ _____

Q.88 $\underline{C}Cl_4 + H_2O \longrightarrow$ _____

Q.89 $\underline{Cl}F_5 + H_2O \longrightarrow$ _____

Q.90 $\underline{N}_2O + H_2O \longrightarrow$ _____

Q.91 $\underline{Cl}O_2 + H_2O \longrightarrow$ _____

Q.92 $H_4\underline{P}_2O_8 + H_2O \longrightarrow$ _____

Q.93 $\underline{N}F_3 + H_2O \longrightarrow$ _____

Q.94 $\underline{Br}F_5 + H_2O \longrightarrow$ _____

Q.95 $\underline{N}O + H_2O \longrightarrow$ _____

Q.96 $\underline{Cl}O_3 + H_2O \longrightarrow$ _____

Q.97 $H\underline{N}O_4 + H_2O \longrightarrow$ _____

Q.98 $\underline{N}Cl_3 + H_2O \longrightarrow$ _____

Q.99 $\underline{I}F_5 + H_2O \longrightarrow$ _____

Q.100 $\underline{N}_2O_3 + H_2O \longrightarrow$ _____

Q.101 $\underline{Cl}_2O_7 + H_2O \longrightarrow$ _____

Q.102 $H_3\underline{P}O_5 + H_2O \longrightarrow$ _____

Q.103 $\underline{Si}F_4 + H_2O \longrightarrow$ _____

Q.104 $\underline{Cl}F_3 + H_2O \longrightarrow$ _____

Q.105 $\underline{N}_2O_4 + H_2O \longrightarrow$ _____

Q.106 $\underline{I}_2O_5 + H_2O \longrightarrow$ _____

Q.107 $H_2\underline{S}O_5 + H_2O \longrightarrow$ _____

Q.108 $\underline{Si}Cl_4 + H_2O \longrightarrow$ _____

Q.109 $\underline{Cr}O_2Cl_2 + H_2O \longrightarrow$ _____

Q.110 $\underline{N}_2O_5 + H_2O \longrightarrow$ _____

Q.111 $\underline{P}Cl_3 + H_2O \longrightarrow$ _____

Q.112 $\underline{Cl}F_3 + H_2O \longrightarrow$ _____

Q.113 $\underline{Si}O_2 + H_2O \longrightarrow$ _____

Q.114 $H_4\underline{B}_2O_5 + H_2O \longrightarrow$ _____

Q.115 $H_2\underline{S}_2O_6 + H_2O \longrightarrow$ _____

Q.116 $\underline{P}Cl_5 + H_2O \longrightarrow$ _____

Q.117 $\underline{Cl}F + H_2O \longrightarrow$ _____

Q.118 $\underline{P}_4O_6 + H_2O \longrightarrow$ _____

Q.119 $H_4\underline{B}_2O_6 + H_2O \longrightarrow$ _____

Q.120 $H_6\underline{Si}_2O_7 + H_2O \longrightarrow$ _____

Q.121 $\underline{S}F_4 + H_2O \longrightarrow$ _____

Q.122 $\underline{Br}F + H_2O \longrightarrow$ _____

Q.123 $H_2\underline{S}_2O_7 + H_2O \longrightarrow$ _____

Q.124 $H_2\underline{S}_2O_8 + H_2O \longrightarrow$ _____

Q.125 $\underline{S}F_6 + H_2O \longrightarrow$ _____

Q.126 $\underline{I}Cl + H_2O \longrightarrow$ _____

Q.127 $\underline{P}_4O_8 + H_2O \longrightarrow$ _____

Q.128 $\underline{P}_4O_{10} + H_2O \longrightarrow$ _____

Q.129 $\underline{P}OCl_3 + H_2O \longrightarrow$ _____

Q.130 $\underline{I}OF_5 + H_2O \longrightarrow$ _____

Q.131 $\underline{P}_4 + H_2O \longrightarrow$ _____

Q.132 $Na\underline{H} + H_2O \longrightarrow$ _____

Q.133 $\underline{B}_2H_6 + H_2O \longrightarrow$ _____

Q.134 $\underline{Cl}_2 + H_2O \longrightarrow$ _____

Q.135 $\underline{S}_8 + H_2O \longrightarrow$ _____

Q.136 $\underline{S}OCl_2 + H_2O \longrightarrow$ _____

Q.137 $\underline{S}O_2Cl_2 + H_2O \longrightarrow$ _____

Q.138 $\underline{Si}H_4 + H_2O \longrightarrow$ _____

Q.139 $\underline{I}_2 + H_2O \longrightarrow$ _____

Q.140 $\underline{S}OF_4 + H_2O \longrightarrow$ _____

Q.141 $\underline{F}_2 + H_2O \longrightarrow$ _____

Assign (A), (B), (C), (D) from given type of reactions.

(A) Disproportionation reaction

(B) Comproportionation reaction

(C) Either intermolecular redox reaction or displacement reaction.

(D) Either thermal combination redox reaction or thermal decomposition redox reaction.

Q.142 $C(s) + O_2(g) \xrightarrow{\Delta}$ _____

Q.143 $3Mg(s) + N_2(g) \longrightarrow$ _____

Q.144 $NaH(s) + H_2O \longrightarrow$ _____

Q.145 $AgNO_3(aq) + Cu(s) \longrightarrow$ _____

Q.146 $NaH(s) + H_2O\ (l) \xrightarrow{RT}$ _____

Q.147 $Na(S) + H_2O\ (l) \xrightarrow{RT}$ _____

Q.148 $Mg(S) + H_2O\ (l) \xrightarrow{warm}$ _____

Q.149 $Fe(s) + H_2O\ (l) \longrightarrow$

Q.150 $Zn(s) + 2HCl \longrightarrow$ _____

Q.151 $Mg(s) + 2HCl \longrightarrow$ _____

Q.152 $Fe(S) + 2HCl \longrightarrow$ _____

Q.153 $Cl_2(g) + KI\ (aq) \longrightarrow$ _____

Q.154 $H_2O_2 \xrightarrow{RT}$ _____

Q.155 $P_4 + NaOH \longrightarrow$ _____

Q.156 $S_8 + NaOH \longrightarrow$ _____

Q.157 $Cl_2 + NaOH\ (cold) \longrightarrow$ _____

Q.158 $I_2 + NaOH\ (cold) \longrightarrow$ _____

Q.159 $Pb_3O_4 + HCl\ (dil.) \xrightarrow{warm}$ _____

Q.160 $Pb_3O_4 + HNO_3 \longrightarrow$ _____

Q.161 $PbO_2 + HCl\ (dil.) \xrightarrow{warm}$ _____

Q.162 $Cr_2O_7^{2-} + H^+ + SO_3^{2-} \longrightarrow$ _____

Q.163 $MnO_4^- + H^+ + Br^- \longrightarrow$ _____

Q.164 $Fe^{2+}(aq) + Cr_2O_7^{2-} + H^+ \longrightarrow$ _____

Q.165 $I_2 + S_2O_3^{2-} \longrightarrow$ _____

Q.166 $Cu^{2+}\ (aq) + 2I^- \longrightarrow$ _____

Q.167 $CuO + H_2 \longrightarrow$ _____

Q.168 $H_3PO_2 + AgNO_3 \longrightarrow$ _____

Q.169 $H_3PO_2 + CuSO_4 \longrightarrow$ _____

Q.170 $NaNO_3 \xrightarrow{\Delta}$ _____

Q.171 $N_2O_3 \xrightarrow{RT}$ _____

Q.172 $Ca(OH)_2 + Cl_2 \longrightarrow$ _____

Q.173 $XeF_4 + H_2O \longrightarrow$ _____

Q.174 $CO + I_2O_5(S) \longrightarrow$ _____

Q.175 $FeCr_2O_4 + Na_2CO_3 + O_2 \longrightarrow$ _____

Q.176 $MnO_2 + 2KOH + \frac{1}{2}O_2 \longrightarrow$ _____

Q.177 $K_2MnO_4 + H^+ \longrightarrow$ _____

Q.178 $KMnO_4 \xrightarrow{\Delta}$ _____

Q.179 $K_2Cr_2O_7 \xrightarrow{\Delta}$ _____

Q.180 $(NH_4)_2Cr_2O_7 \xrightarrow{\Delta}$ _____

Q.181 $NH_4Cl + NaNO_2 \xrightarrow{\Delta}$ _____

Q.182 $Ba(N_3)_2 \xrightarrow{\Delta}$ _____

Q.183 $N_2 + O_2 \xrightarrow{\text{High temp.}}$ _____

Q.184 $N_2 + 3H_2 \longrightarrow$ _____

Q.185 $NH_4NO_3 \xrightarrow{\Delta}$ _____

Q.186 $NaNO_2 + FeSO_4 + H_2SO_4 \longrightarrow$ _____

Q.187 $NO + NO_2 \xrightarrow{-11°C}$ _____

Q.188 $Pb(NO_3)_2 \xrightarrow{\Delta}$ _____

Q.189 $P_4 + 6Cl_2 \xrightarrow{\Delta}$ _____

Q.190 $P_4 + 10Cl_2 \xrightarrow{\Delta}$ _____

Q.191 $Ag + PCl_5 \xrightarrow{\Delta}$ _____

Q.192 $Sn + PCl_5 \xrightarrow{\Delta}$ _____

Q.193 $PCl_5 \xrightarrow{\Delta}$ _____

Q.194 Red P + Alkali $\longrightarrow$ _____

Q.195 $H_3PO_3 \xrightarrow{\Delta}$ _____

Q.196 $Se_2Cl_2 \xrightarrow{\Delta}$ _____

Q.197 $Na_2S + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.198 $MnO_2 + NaCl + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.199 $NaBr + MnO_2 + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.200 $NaI + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.201 $NaI + MnO_2 + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.202 $NaNO_3 + H_2SO_4$ (conc.) $\xrightarrow{\text{hot}}$ _____

Q.203 $Na_2C_2O_4 + H_2SO_4$ (conc.) $\longrightarrow$ _____

Q.204 $3PbS + 8HNO_3$ (dil.) $\longrightarrow$ _____

Q.205 $S + HNO_3$ (hot and dil.) $\longrightarrow$ _____

Q.206 $CuSO_4 + Zn(s) \longrightarrow$ _____

Assign (A), (B), (C), (D) from given type of reactions.
(A) coloured ppt/black ppt
(B) coloured solution
(C) clear/colour less solution
(D) white ppt.

Q.207 $2NaOH + Zn(OH)_2 \downarrow \longrightarrow$ _____

Q.208 $Mn(OH)_2 + H_2SO_4 \longrightarrow$ _____

Q.209 $2AgNO_3 + 2NaOH \longrightarrow$ _____

Q.210 $Cr(OH)_3 \downarrow + NH_3$ (excess) $\longrightarrow$ _____

Q.211 $CuSO_4 + NH_3$ (excess) $\longrightarrow$ _____

Q.212 $NiCl_2 + NH_3$ (excess) $\longrightarrow$ _____

Q.213 $FeCl_3 + NH_3$ (excess) $\longrightarrow$ _____

Q.214 $Na_2[Zn(OH)_4] + 4HCl \longrightarrow$ _____

Q.215 $[Cr(NH_3)_6]^{3+} + 6HCl \longrightarrow$ _____

Q.216 $2KCN + Pb(NO_3)_2 \longrightarrow$ _____

Q.217 $4KCN + Fe(CN)_3 \downarrow \longrightarrow$ _____

Q.218 $3KCN + Fe(CN)_3 \downarrow \longrightarrow$ _____

Q.219 $CuSO_4 + KCN$ (excess) $\longrightarrow$ _____

Q.220 $K_3[Fe(CN)_6] + FeCl_3 \longrightarrow$ _____

Q.221 $K_3[Fe(CN)_6] + FeCl_2 \longrightarrow$ _____

Q.222 $KI + BiI_3 \downarrow \longrightarrow$ _____

Q.223 $2KI + HgI_2 \downarrow \longrightarrow$ _____

Q.224 $KI + AgNO_3 \longrightarrow$ _____

Q.225 $2KI + FeCl_2 \longrightarrow$ _____

Q.226 $2KI + CuSO_4 \longrightarrow$ _____

Q.227 $BaCO_3\downarrow + CO_2 + H_2O \longrightarrow$ _____

Q.228 $Ba(OH)_2 + CO_2 \longrightarrow$ _____

Q.229 $BaSO_3\downarrow + SO_2 + H_2O \longrightarrow$ _____

Q.230 $Ba(OH)_2 + SO_2 \longrightarrow$ _____

Q.231 $Na_2CO_3 + PbSO_4 \longrightarrow$ _____

Q.232 $Na_2CO_3 + Pb(NO_3)_2 \longrightarrow$ _____

Q.233 $Na_2CO_3 + KNO_3 \longrightarrow$ _____

Q.234 $Na_2CO_3 + AgNO_3 \longrightarrow$ _____

Q.235 $Na_3PO_4 + Fe_2(SO_4)_3 \longrightarrow$ _____

Q.236 $NiCl_2$ soln. + $NaNO_3$ soln. $\longrightarrow$ _____

Q.237 $CuSO_4$ soln. + $ZnCl_2$ soln. $\longrightarrow$ _____

Q.238 $FeSO_4 + Na_2S \longrightarrow$ _____

Q.239 $FeCl_3 + Na_3PO_4 \longrightarrow$ _____

Q.240 $AlCl_3 + Na_3PO_4 \longrightarrow$ _____

Q.241 $CrCl_3$ soln. + $ZnSO_4$ soln. $\longrightarrow$ _____

Q.242 $Na_2CrO_4 + H_2SO_4 \longrightarrow$ _____

Q.243 $K_2Cr_2O_7 + KOH \longrightarrow$ _____

Q.244 $Na_2CrO_4 + AgF \longrightarrow$ _____

Q.245 $KMnO_4 + NaNO_3 \longrightarrow$ _____

Q.246 $MnSO_4 + Sr(NO_3)_2 \longrightarrow$ _____

Q.247 $ZnSO_4$ soln. + $MgCl_2$ soln. $\longrightarrow$ _____

Q.248 $AgNO_3$ soln. + NaF soln. $\longrightarrow$ _____

Q.249 $(NH_4)_2\ SO_4 + Ba(OH)_2 \longrightarrow$ _____

Q.250 $(PH_4)_2SO_4 + Sr(OH)_2 \longrightarrow$ _____

[ANSWER KEY]

EXERCISE

Q.1	A	Q.2	B	Q.3	A	Q.4	A	Q.5	D
Q.6	B	Q.7	A	Q.8	B	Q.9	A	Q.10	A
Q.11	D	Q.12	B	Q.13	B	Q.14	B	Q.15	B
Q.16	B	Q.17	A	Q.18	B	Q.19	A	Q.20	B
Q.21	B	Q.22	B	Q.23	A	Q.24	B	Q.25	B
Q.26	A	Q.27	A	Q.28	B	Q.29	B	Q.30	B
Q.31	A	Q.32	A	Q.33	C	Q.34	A	Q.35	D
Q.36	A	Q.37	B	Q.38	B	Q.39	D	Q.40	C
Q.41	A	Q.42	A	Q.43	B	Q.44	D	Q.45	A
Q.46	A	Q.47	B	Q.48	B	Q.49	A	Q.50	B
Q.51	B	Q.52	A	Q.53	D	Q.54	B	Q.55	A
Q.56	A	Q.57	A	Q.58	C	Q.59	C	Q.60	D
Q.61	A	Q.62	A	Q.63	A	Q.64	B	Q.65	A
Q.66	A	Q.67	A	Q.68	A	Q.69	B	Q.70	D
Q.71	B	Q.72	A	Q.73	A	Q.74	A	Q.75	A
Q.76	B	Q.77	A	Q.78	A	Q.79	B	Q.80	D
Q.81	A	Q.82	C	Q.83	A	Q.84	A	Q.85	A
Q.86	B	Q.87	A	Q.88	D	Q.89	A	Q.90	D
Q.91	C	Q.92	A	Q.93	D	Q.94	A	Q.95	D
Q.96	A	Q.97	A	Q.98	D	Q.99	A	Q.100	B
Q.101	A	Q.102	A	Q.103	A	Q.104	B	Q.105	C
Q.106	A	Q.107	A	Q.108	A	Q.109	A	Q.110	A
Q.111	B	Q.112	B	Q.113	D	Q.114	A	Q.115	C
Q.116	A	Q.117	B	Q.118	B	Q.119	A	Q.120	A

Q.121	B	Q.122	B	Q.123	A	Q.124	A	Q.125	D
Q.126	B	Q.127	C	Q.128	A	Q.129	A	Q.130	A
Q.131	D	Q.132	D	Q.133	A	Q.134	B	Q.135	D
Q.136	B	Q.137	A	Q.138	A	Q.139	D	Q.140	A
Q.141	D	Q.142	D	Q.143	D	Q.144	BC	Q.145	C
Q.146	C	Q.147	C	Q.148	C	Q.149	C	Q.150	C
Q.151	C	Q.152	C	Q.153	C	Q.154	A	Q.155	A
Q.156	A	Q.157	A	Q.158	A	Q.159	C	Q.160	C
Q.161	C	Q.162	C	Q.163	C	Q.164	C	Q.165	C
Q.166	C	Q.167	C	Q.168	C	Q.169	C	Q.170	D
Q.171	A	Q.172	A	Q.173	A	Q.174	C	Q.175	C
Q.176	C	Q.177	A	Q.178	D	Q.179	D	Q.180	D
Q.181	B	Q.182	D	Q.183	CD	Q.184	D	Q.185	BD
Q.186	C	Q.187	B	Q.188	D	Q.189	CD	Q.190	CD
Q.191	C	Q.192	C	Q.193	D	Q.194	A	Q.195	AD
Q.196	AD	Q.197	C	Q.198	C	Q.199	C	Q.200	C
Q.201	C	Q.202	D	Q.203	A	Q.204	C	Q.205	C
Q.206	C	Q.207	C	Q.208	B	Q.209	A	Q.210	B
Q.211	B	Q.212	B	Q.213	A	Q.214	C	Q.215	B
Q.216	D	Q.217	B	Q.218	B	Q.219	C	Q.220	B
Q.221	A	Q.222	B	Q.223	C	Q.224	A	Q.225	B
Q.226	D	Q.227	C	Q.228	D	Q.229	C	Q.230	D
Q.231	D	Q.232	D	Q.233	C	Q.234	D	Q.235	A
Q.236	B	Q.237	B	Q.238	A	Q.239	B	Q.240	D
Q.241	B	Q.242	B	Q.243	B	Q.244	A	Q.245	B
Q.246	D	Q.247	C	Q.248	C	Q.249	D	Q.250	D