

MT EDUCARE LTD.

ICSE X

SUBJECT : **CHEMISTRY**

NITRIC ACID

Assignment Sheet

STEP UP ANSWERSHEET

23. (i) Nitrogen dioxide
(ii) Oxygen [2013]
24. $C + 4HNO_3 \longrightarrow CO_2 + 2H_2O + 4NO_2$ [2013]
Conc.
25. nitric oxide [2014]
26. $Cu + 4HNO_3 \xrightarrow{\Delta} Cu(NO_3)_2 + 2H_2O + 2NO_2$ [2014]
(Copper) (Conc.) (Copper nitrate)
27. $NaNO_3 + H_2SO_4 \xrightarrow{< 200^\circ C} NaHSO_4 + HNO_3$ [2014]
(Sodium nitrate) (Conc.) (Sodium hydrogen sulphate) (Nitric acid)
28. (i) Because it does not liberate hydrogen. It is a powerful oxidising agent and the nascent oxygen formed oxidises hydrogen to water.
(ii) Because when nitric acid is left standing in a glass bottle, it decomposes to give reddish brown NO_2 gas which dissolves in undecomposed nitric acid to give a yellow colour.
(iii) Because nitric acid vapours are corrosive and may attack rubber cork or metal. [2015]
29. $Cu + 4HNO_3 \longrightarrow Cu(NO_3)_2 + 2NO_2 + 2H_2O$ [2016]
30. (i) Nitric oxide
(ii) Nitrogen dioxide [2016]
31. (i) $3Cu(s) + 8HNO_3 \longrightarrow 3Cu(NO_3)_2(aq.) + 4H_2O(l) + 2NO(g)$
Copper Nitric acid Copper Nitrate Water Nitric oxide
- (ii) $S(s) + 6HNO_3(aq) \longrightarrow 2H_2O + H_2SO_4(aq) + 6NO_2(g)$
Sulphur Nitric acid Water Sulphuric acid Nitrogen dioxide
- (iii) $KNO_3(s) + H_2SO_4(l) \longrightarrow HNO_3(l) + KHSO_4(s)$
Potassium nitrate Sulphuric acid Nitric acid Potassium hydrogen sulphate [2017]

