ROADMAP PROBLEM : 11

$N \xrightarrow{H_3O^\oplus} O \xrightarrow[\text{Reagent}]{\text{Fenton's}} P \xrightarrow[\text{(ii) } H^\oplus]{\text{(i) NaOI}} R + \underline{S} \xrightarrow{\Delta} T$

R (Yellow ppt)

$O \xrightarrow{\Delta} Q_1 + Q_2 + Q_3$ mixture of lactides

N $\xleftarrow[\text{pH} \simeq 9]{\text{HCN}}$ M

$R \xrightarrow{Ag/\Delta} U$

$U \xrightarrow[\text{High T / P \& L.A.}]{CO + H_2O} V$

$U \xrightarrow[\text{High T / P \& L.A.}]{CO + MeOH} W \xrightarrow{\text{Polymerisation}} PMA$

$M \xrightarrow[\text{NaHCO}_3 / \Delta]{\text{DMSO}} L \xleftarrow{\text{AgOH / Br}_2 / \text{CCl}_4 / \Delta} A \xrightarrow[\text{Br}_2]{\text{Red P}} B \xrightarrow[\text{excess}]{\text{NH}_3} C$

$P \xrightarrow{\text{Zn} - \text{Hg / HCl}} A$

$A \xrightarrow[\text{or PCl}_3]{\text{SOCl}_2 \text{ or PCl}_5} J \xrightarrow[\text{Ag} / \Delta / H_2O]{\text{CH}_2N_2} K$

$A \xrightarrow[H_2SO_4 / \Delta]{N_3H} D \xrightarrow[\text{Reagent}]{\text{Hinsberg's}} E$ Base soluble product

$D \xrightarrow[\text{HCl}]{\text{NaNO}_2} F \xrightarrow{\text{CAN}} \text{Red colour}$

$A \xrightarrow[\text{H}_2\text{SO}_4]{\text{EtOH | Conc.}}$ Pineapple like Fruity odor

G $\xrightarrow{\text{EtONa}}$ H

$H \xrightarrow{H_3O^\oplus / \Delta} I$

$I \xrightarrow[\text{Conc. H}_2\text{SO}_4 / \Delta]{N_3H} X \xrightarrow{H_3O^\oplus} A + \underline{D} \xrightarrow[\text{KOH / }\Delta]{\text{CHCl}_3} Y$ (foul smelling compound)

$A + D \xrightarrow{\text{NaHCO}_3}$ Sodium salt of A + CO$_2\uparrow$ $\xrightarrow{\text{Electrolysis}} Z$

$I \xrightarrow{\text{MCPBA}} G$

$Y \xrightarrow{H_3O^\oplus} D + T$