Identify Z in the following sequence of reactions- $CH_3COONH_4 \xrightarrow{\Delta} X \xrightarrow{P_2O_5} Y \xrightarrow{H_2O/H} Z$

A) $CH_3 - CH_2 - CO - NH_2$

B) $CH_3 - CN$

C) $(CH_3CO)_2O$

D) $CH_3 - COOH$

Correct Answer: D

Solution :

[d] $CH_3COONH_4 \xrightarrow{\Delta} \underset{(X)}{CH_3CONH_2} \xrightarrow{\Delta/P_2O_5} \underset{(Y)}{CH_3CN} \xrightarrow{H_3O^{\oplus}} \underset{(Z)}{CH_3OOH}$