ORGANIC CHEMISTRY

ACID DERIVATIVE

1. Considering the reaction sequence given below, the correct statement(s) is(are) [JEE(Advanced) 2022]

H₃C COOH
$$\frac{1. \text{ Br}_2, \text{ red phosphorous}}{2. \text{ H}_2\text{O}} \triangleright \mathbf{P} \xrightarrow{\mathbf{Q}} \mathbf{Q} + \bigcirc \mathbf{COOH}$$
COOH
$$\frac{1. \text{ Br}_2, \text{ red phosphorous}}{2. \text{ NaOH}} \bullet \mathbf{Q} + \bigcirc \mathbf{COOH}$$

- (A) P can be reduced to a primary alcohol using NaBH₄.
- (B) Treating \mathbf{P} with conc. NH₄OH solution followed by acidification gives \mathbf{Q} .
- (C) Treating \mathbf{Q} with a solution of NaNO₂ in aq. HCl liberates N₂.
- (D) **P** is more acidic than CH₃CH₂COOH.

SOLUTIONS

1. Ans. (B, C, D) Sol.