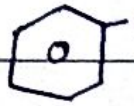
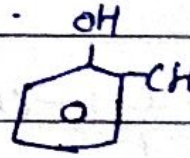
Q. Compound (A) reacts with $CHCl_3$ & KOH to form compound (B) & (C). When (B) & (C) separately reacts with Zn dust then it gives same compound (D). On oxidation (D) gives (E) having molecular formula $C_7H_6O_2$. Compound (F) is obtained by decarboxylation of sod. salt of (E). (F) can also obtained by reaction of (A) with Zn dust. Identify A, B, C, D, E, F.

(E) → has benzene ring ⇒ C_6H_5COOH 

(F) → benzene: 

So, A must be phenol 

A → B and C it is Reimer Tiemann rxn.  

∴ B and C are o-para isomers of

(D) →  Benzaldehyde

Oxidation → 

Sod. salt of E:  $\xrightarrow[CaO]{NaOH}$  (F)