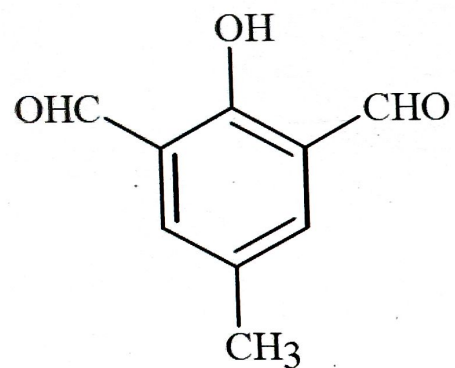
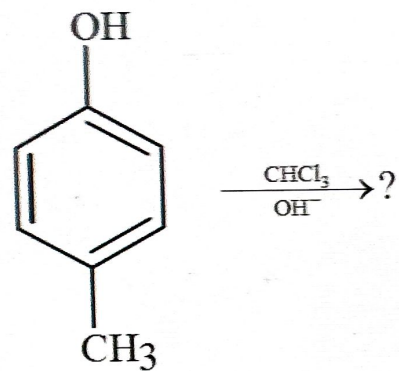
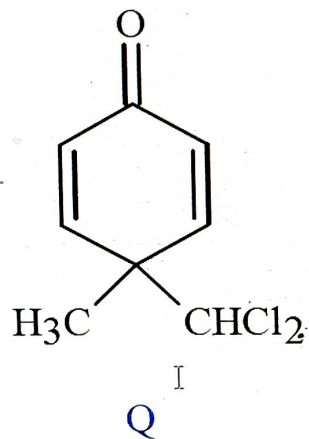


22. In the following reaction, the product(s) formed is(are)

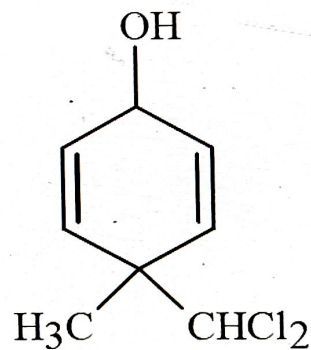


P

- (A) P(major)
(C) R(minor)
(B, D)

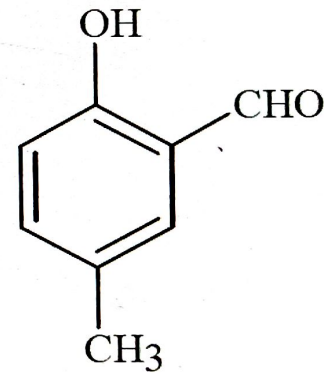


Q



R

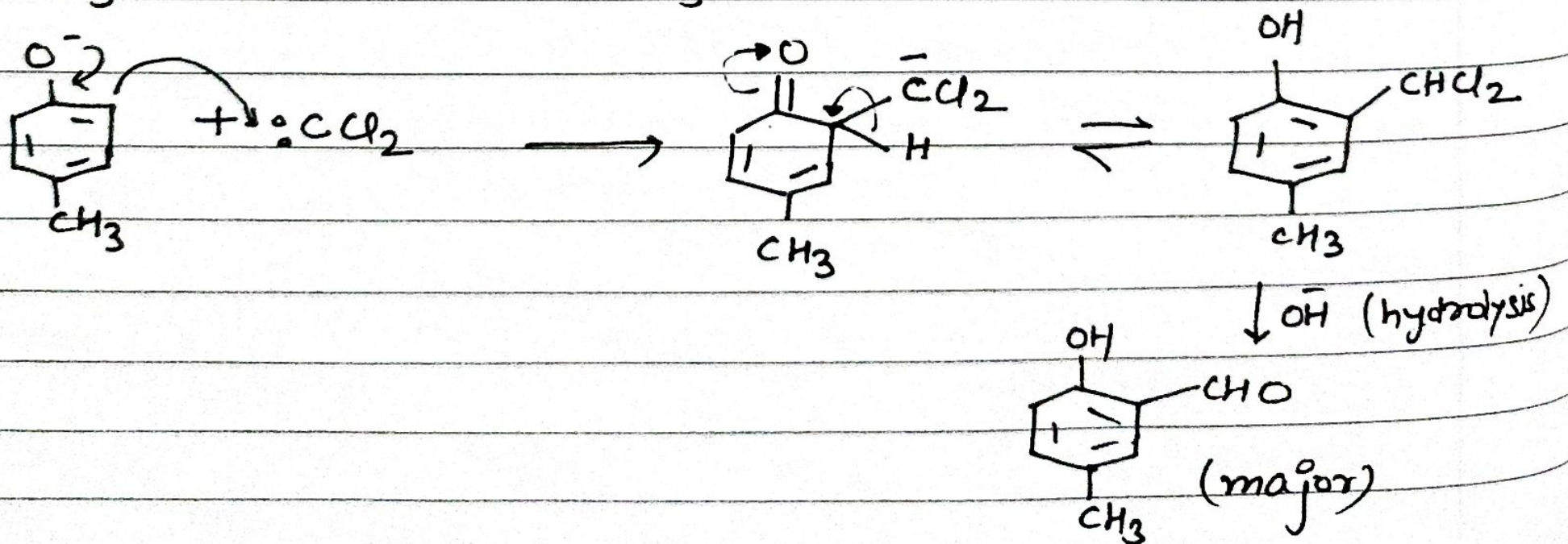
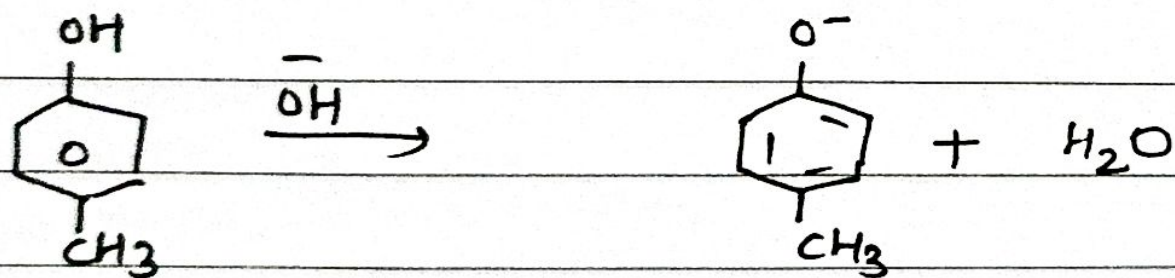
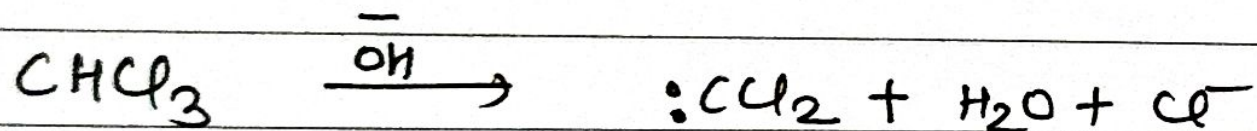
- (B) Q(minor)
(D) S(major)



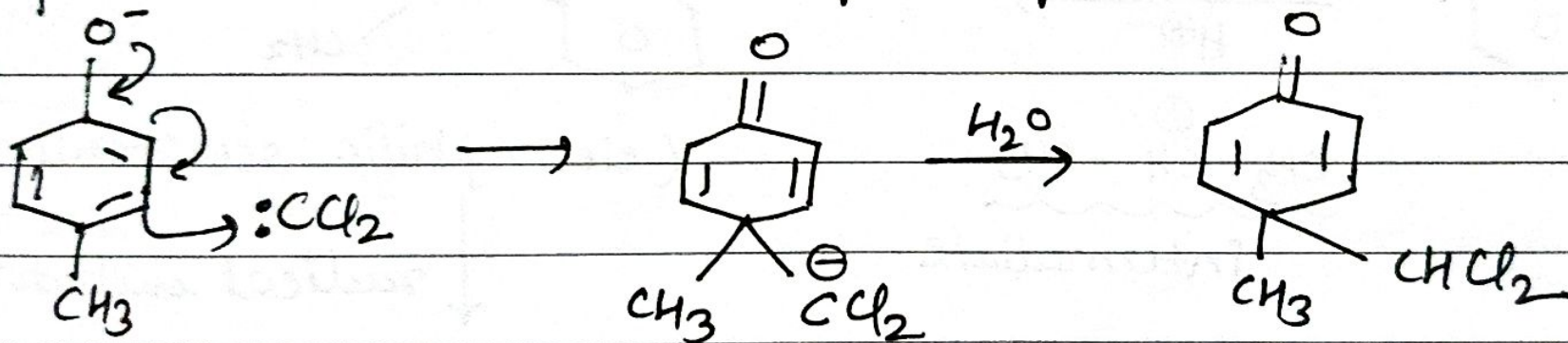
S

Sol.

The question is an abnormal case of Reimann Tiemann Reaction. See the mechanism:-



If carbene attaches at para position;



Due to steric repulsion at benzene ring, further hydrolysis of CHCl_2 doesn't occur and the minor product formed is

