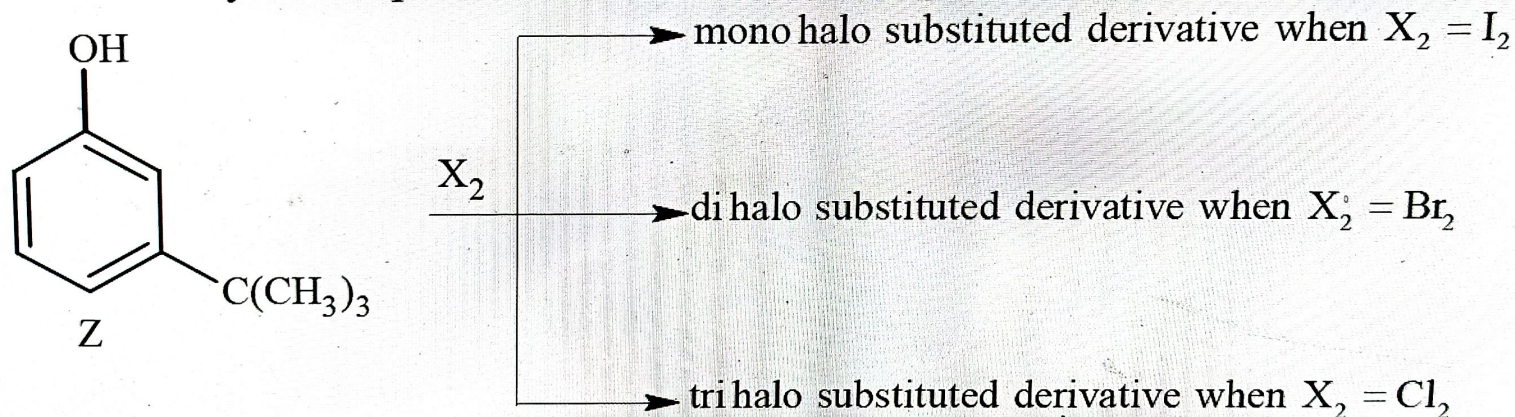
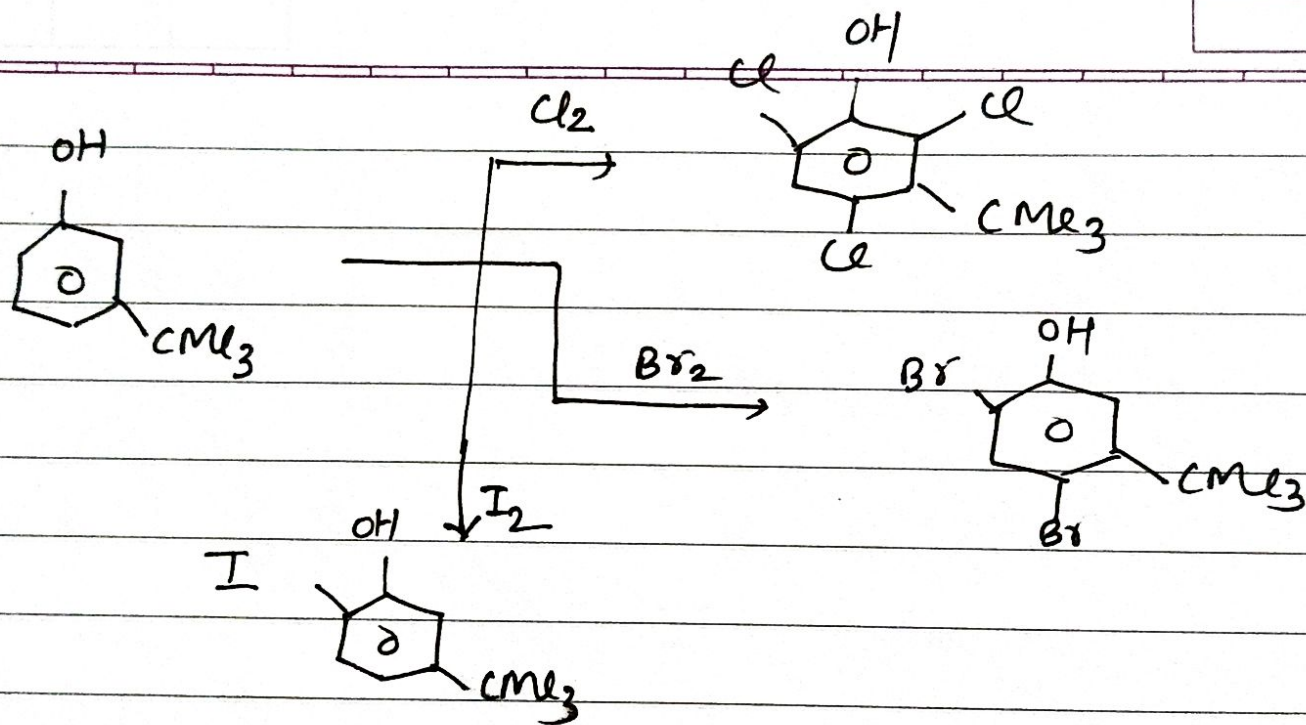


*26. The reactivity of compound Z with different halogens under appropriate conditions is given below:



The observed pattern of electrophilic substitution can be explained by

- (A) the steric effect of the halogen
- (B) the steric effect of the tert-butyl group
- (C) the electronic effect of the phenolic group
- (D) the electronic effect of the tert-butyl group



Phenol is ortho para directing. So, substitution occurs at ortho or para. Since steric effect of Iodine is largest it is single substituted as there is very large steric repulsion. Similar order follows for Br and Cl. Steric effect of CMe_3 also plays a role as it limits the no. of halogen atoms substituted due to increased steric repulsion.

\therefore (A), (B), (C) are correct.