

**Question 12. Phenol is less acidic than .**

**(a) ethanol (b) o-nitrophenol**

**(c) o-methylphenol (d) o-methoxyphenol**

**Solution:** (b) In o-nitrophenol, nitro group is present at ortho position. Presence of electron withdrawing group at ortho position increases the acidic strength. On the other hand, in o-methylphenol and in o-methoxyphenol, electron releasing group ( $-\text{CH}_3$ - $\text{OCH}_3$ )

Presence of these groups at ortho or para positions of phenol decreases the acidic strength of phenols. So, phenol is less acidic than o-nitrophenol.