84. The reaction of toluene with Cl_2 in presence of $FeCl_3$ gives predominantly : **(2007)**

(A) benzoyl chloride **(B)** benzyl chloride

(C) o-and p-chlorotoluene **(D)** m-chlorotoluene

85 Presence of a nitro group in a benzene ring : **(2007)**

(A) activates the ring towards electrophilic substitution

(B) renders the ring basic

(C) deactivates the ring towards nucleophilic substitution

(D) deactivates the ring towards electrophilic substitution

86. The compound formed as a result of oxidation of ethyl benzene by $KMnO_4$ is : **(2007)**

(A) benzophenone **(B)** acetophenone

(C) benzoic acid **(D)** benzyl alcohol

87. In the following sequence of reactions, the alkene affords the compound 'B'

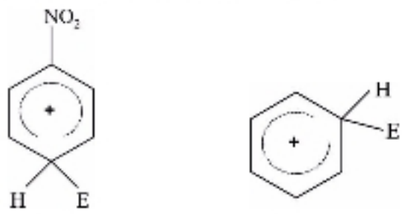
$$CH_3CH = CHCH_3 \xrightarrow{O_3} A \xrightarrow[Zn]{H_2O} B$$

The compound B is : **(2008)**

(A) CH_3CH_2CHO **(B)** CH_3COCH_3

(C) $CH_3CH_2COCH_3$ **(D)** CH_3CHO

88. The electrophile, $E^{\oplus}$ attacks the benzene ring to generate the intermediate σ - complex. Of the following, which σ – complex is of lowest energy ? **(2008)**



(A) **(B)** **(C)** **(D)**

89. The treatment of CH_3MgX with $CH_3C \equiv C - H$ produces : **(2008)**

(A) $CH_3 - CH = CH_2$ **(B)** $CH_3C \equiv C - CH_3$

(C) $CH_3 - \overset{H}{\underset{|}{C}} = \overset{H}{\underset{|}{C}} - CH_3$ **(D)** CH_4

90. The synthesis of 3-octyne is achieved by adding a bromoalkane into a mixture of sodium amide and alkyne. The bromoalkane and alkyne respectively are : **(2010)**

(A) $BrCH_2CH_2CH_2CH_2CH_3$ and $CH_3CH_2C \equiv CH$

(B) $BrCH_2CH_2CH_3$ and $CH_3CH_2CH_2C \equiv CH$

(C) $BrCH_2CH_2CH_2CH_2CH_3$ and $CH_3C \equiv CH$

(D) $BrCH_2CH_2CH_2CH_3$ and $CH_3CH_2C \equiv CH$