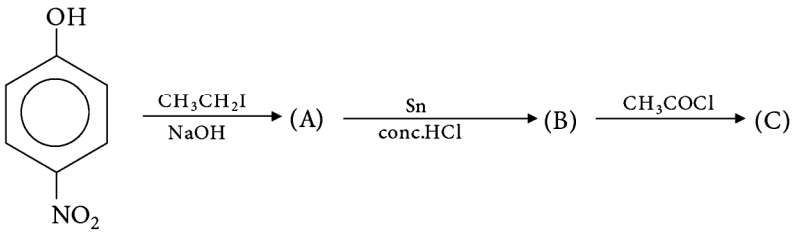
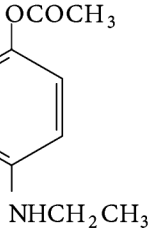
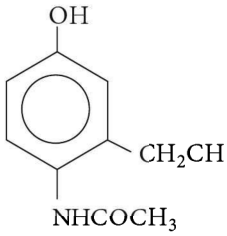
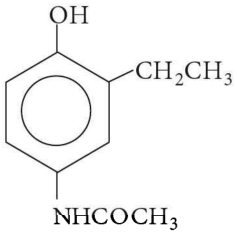
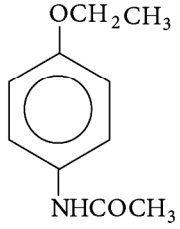
134. 

The product (c) is

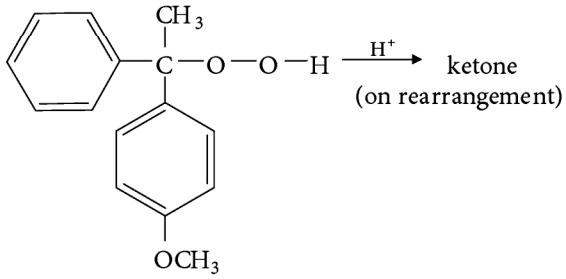
(a) 

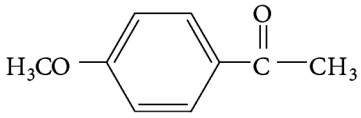
(b) 

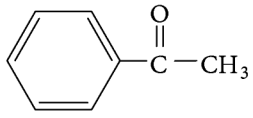
(c) 

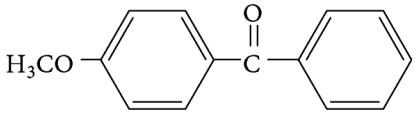
(d) 

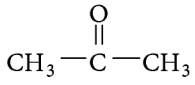
135. When the hydroperoxide shown below rearranges under acid conditions, the ketone obtained is mainly



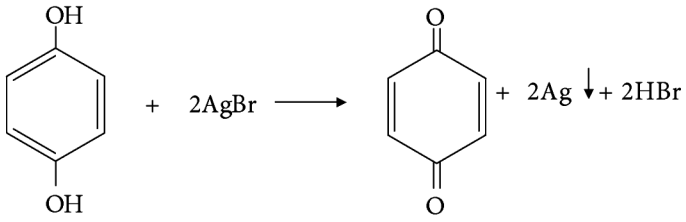
(a) 

(b) 

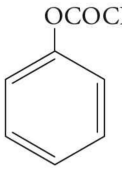
(c) 

(d) 

136. Identify the statement or reaction which is correctly represented.

(a) 

This reaction finds application in photography.

(b) Conversion of 

under the influence of anhydrous $AlCl_3$ under hot conditions to give o-hydroxy acetophenone is known as Claisen rearrangement.

(c) In the azodye test when phenyl diazonium chloride is reacted with phenol, the phenolic –OH is replaced by the diazonium group.

(d) Between phenol and cyclohexanol, the latter has a lower pK_a value.

137. Reimer-Tiemann reaction involves

(a) an aromatic nucleophilic substitution (b) a carbocation intermediate

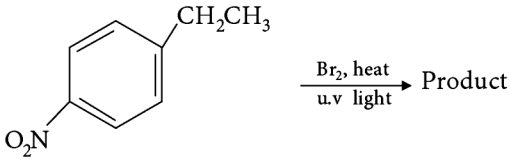
(c) a nucleophilic addition (d) a carbene intermediate

138. Phenol is less acidic than

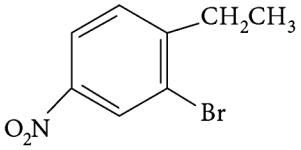
(a) water (b) ethanol (c) p-nitrophenol (d) p-methoxyphenol

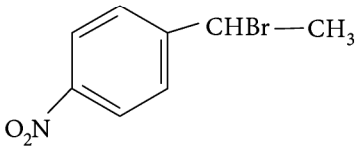
139. Naphthalene $\xrightarrow[V_2O_5, 773\ K]{air}$ (A) $\xrightarrow[Con.H_2SO_4]{phenol}$ (B) The product (b) in the above reaction is

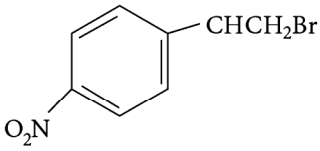
(a) phenyl benzoate (b) phenolphthalein (c) Fluorescein (d) p-hydroxyazobenzene

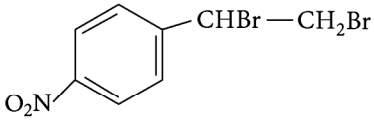
140. 

The structure of the product is

(a) 

(b) 

(c) 

(d) 

141. The increasing order of acid strength of 4-Methoxyphenol (I), 4Nitrophenol (II) and 4-Methylphenol (III) is

(a) III < I < II (b) I < II < III (c) I < III < II (d) III < II < I

142. The correct order of activating influence of the following groups when attached to benzene ring is

(a) $-O^- > -OCOCH_3 > -OH > -COCH_3$ (b) $-O^- > -OH > -OCOCH_3 > -COCH_3$

(c) $-OH > -O^- > -OCOCH_3 > -COCH_3$ (d) $-OH > -OCOCH_3 > -O^- > -COCH_3$

143. The reagent used to convert phenol to quinol is

(a) $KMnO_4/H_2SO_4$ (b) KOH followed by acidification

(c) $K_2S_2O_8$ followed by acidification (d) Moist silver oxide

144. Ozonolysis of o-xylene gives

(a) glyoxal and methyl glyoxal only (b) glyoxal and dimethyl glyoxal only

(c) methyl glyoxal and dimethyl glyoxal only (d) glyoxal, methyl glyoxal and dimethyl glyoxal

145. When benzene vapours are passed through a red hot tube at 973K – 1073K, it forms

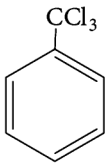
(a) acetylene (b) maleic anhydride (c) biphenyl (d) naphthalene

146. Reaction of excess of benzene with chloroform in presence of anhydrous chloride gives

(a) biphenyl (b) triphenyl methane (c) anthracene (d) diphenyl methane

147. Ethyl benzene $\xrightarrow{NBS}$ A $\xrightarrow{alc.KOH}$ B. The product B in the above reaction sequence is

(a) styrene (b) 1-phenyl ethanol (c) 2-phenyl ethanol (d) p-ethylphenol

148.  + Br_2 $\xrightarrow{FeBr_3}$ X

The major product X in the above reaction is

(a) o-bromo benzotrichloride
(b) p-bromobenzotrichloride
(c) m-bromo benzotrichloride
(d) a mixture of o- bromo and p-bromobenzotrichloride

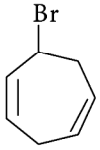
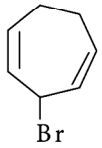
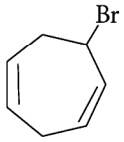
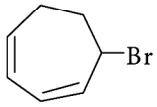
149. Which among the following is more acidic than phenol?

(a) o-methoxy phenol
(b) m-methoxy phenol
(c) p-methoxyphenol
(d) none of these

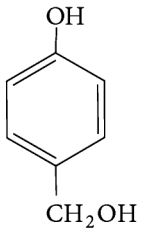
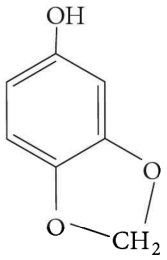
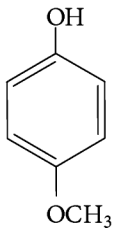
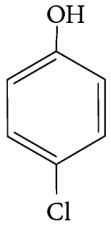
150. Which of the following will decompose $NaHCO_3$ solution with the liberation of CO_2 gas?

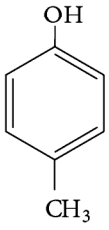
(a) phenol (b) p-nitrophenol (c) p-cresol (d) 2,4,6-trinitrophenol

151. Identify the major product of the reaction  $\xrightarrow{NBS}$ Product

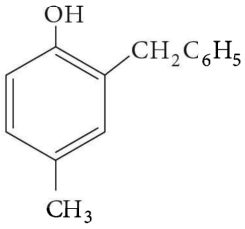
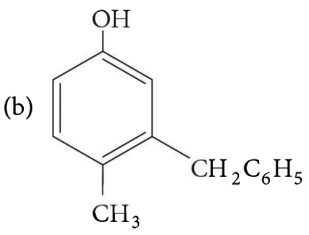
(a) 
(b) 
(c) 
(d) 

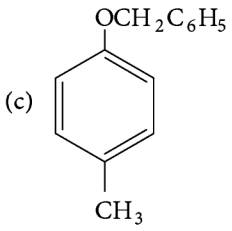
152. The most acidic phenol among the following is

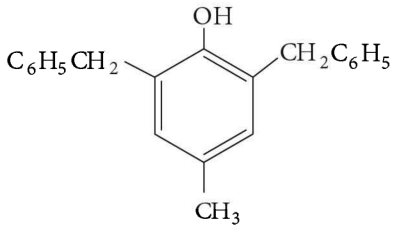
(a) 
(b) 
(c) 
(d) 

153.  $\xrightarrow[C_6H_5CH_2Cl]{NaOH}$ X

The major product X in the above reaction is

(a) 
(b) 

(c) 

(d) 

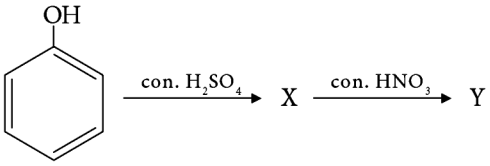
154. Anisole is not formed in the reaction

(a) phenol + $CH_3Br \xrightarrow{NaOH}$

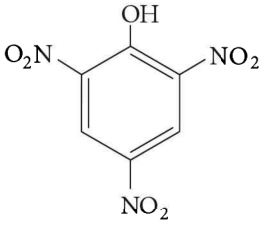
(b) phenol + $CH_2N_2 \longrightarrow$

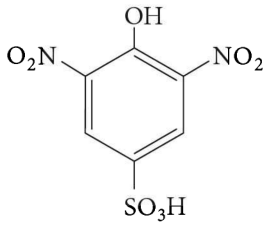
(c) phenol + $(CH_3)_2SO_4 \xrightarrow{NaOH}$

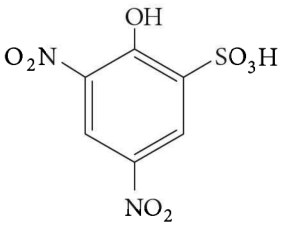
(d) phenol + $CH_3MgBr \longrightarrow$

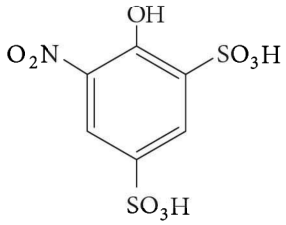
155. 

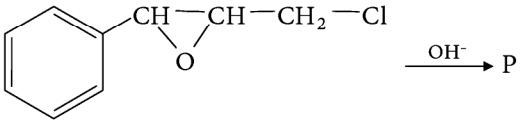
The product Y in the above sequence of reaction is

(a) 

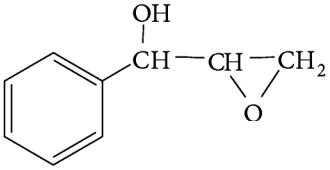
(b) 

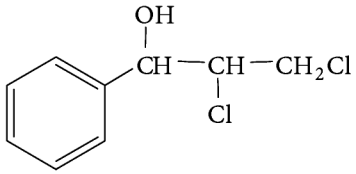
(c) 

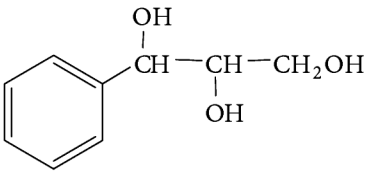
(d) 

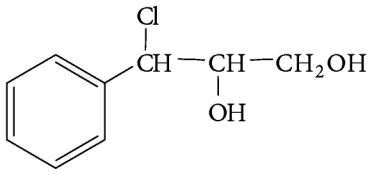
156. 

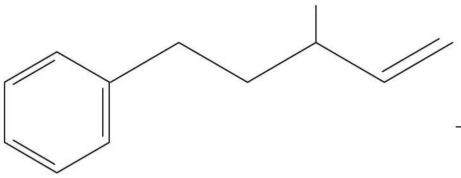
The product P in the above reaction is

(a) 

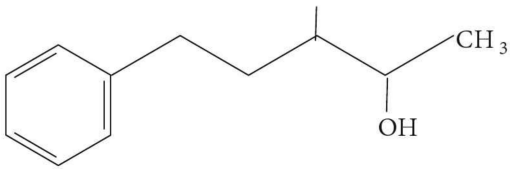
(b) 

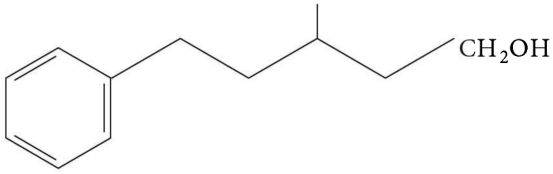
(c) 

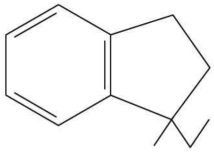
(d) 

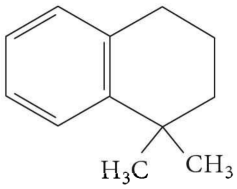
157.  $\xrightarrow{H^{\oplus}}$ product

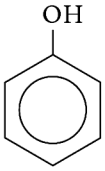
The likely structure of the product is

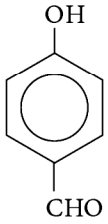
(a) 

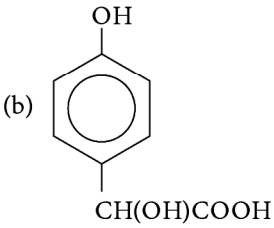
(b) 

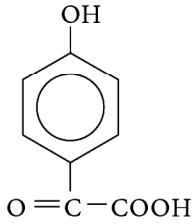
(c) 

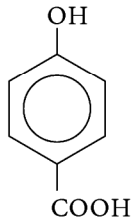
(d) 

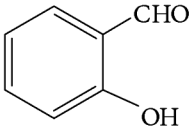
158.  $\xrightarrow[K_2CO_3]{CCl_3CHO}$ (A) $\xrightarrow[NaOH]{Na_2Cr_2O_7}$ (B). The major product (b) is

(a) 

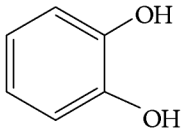
(b) 

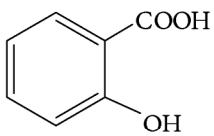
(c) 

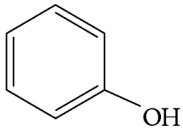
(d) 

159.  $+ H_2O_2 \xrightarrow{NaOH}$ A $\xrightarrow{H_3O^+}$ B

The major product B formed in the above reaction is

(a) 

(b) 

(c) 

(d)