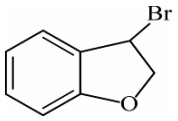
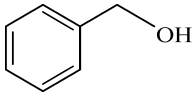
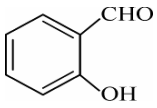
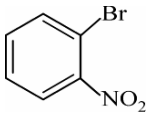
Date Planned : __ / __ / __	Daily Tutorial Sheet-6	Expected Duration : 45 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

75. Match each of the compounds given in Column I with the reaction(s) that they can undergo, given in Column II. **(2008)**

Column I		Column II	
(A)		**(p)**	Nucleophilic substitution
(B)		**(q)**	Elimination
(C)		**(r)**	Nucleophilic addition
(D)		**(s)**	Esterification with acetic anhydride
		(t)	Dehydrogenation

76. Which of the following on heating with aqueous KOH produced acetaldehyde? **(2009)**

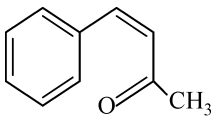
(A) CH_3COCl **(B)** CH_3CH_2Cl **(C)** CH_2ClCH_2Cl **(D)** CH_3CHCl_2

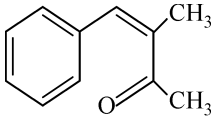
PARAGRAPH FOR QUESTIONS 77 - 79

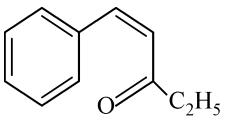
A carbonyl compound P, which gives positive iodoform test, undergoes reaction with MeMgBr followed by dehydration to give an olefin Q. Ozonolysis of Q leads to a dicarbonyl compound R, which undergoes intramolecular aldol reaction to give predominantly S. **(2009)**

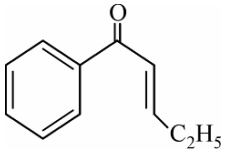
$$P \xrightarrow[2.\ H^+,\ H_2O \\ 3.\ H_2SO_4\ /\ heat]{1.\ MeMgBr} Q \xrightarrow{O_3/Zn\text{-}H_2O} R \xrightarrow[heat]{OH^-} S$$

77. The structure of the carbonyl compound P, is :

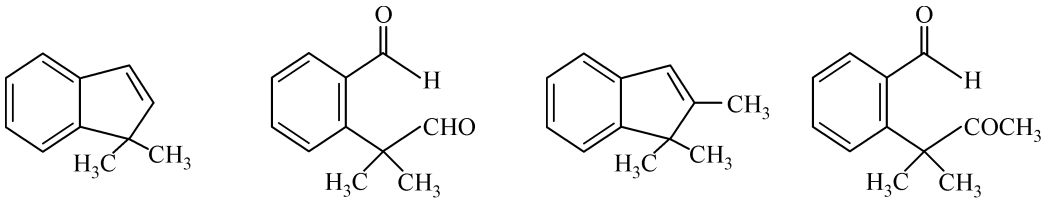

(A)


(B)

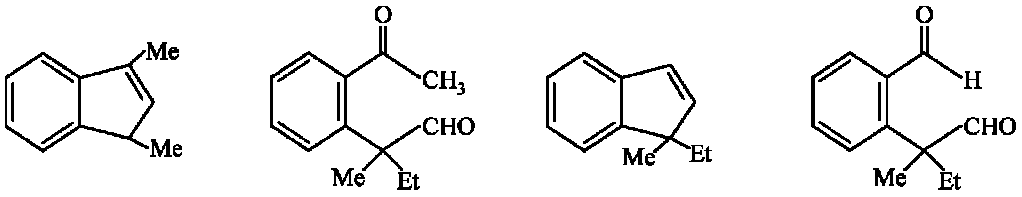

(C)


(D)

78. The structure of the products Q and R, respectively, are :

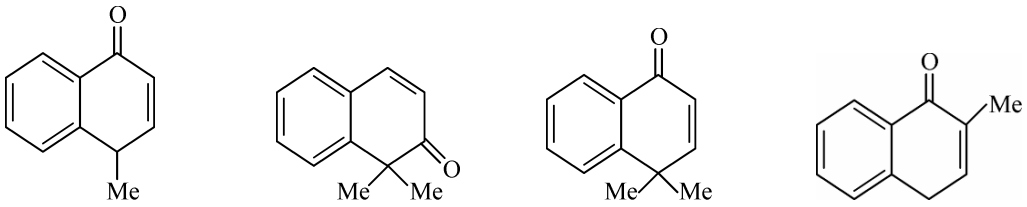


(A) **(B)**



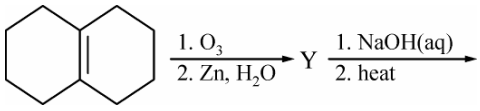
(C) **(D)**

79. The structure of the product S, is :



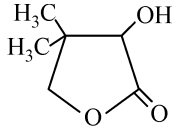
(A) **(B)** **(C)** **(D)**

80. In the scheme given below, the total number of intramolecular aldol condensation products formed from Y is : **(2010)**

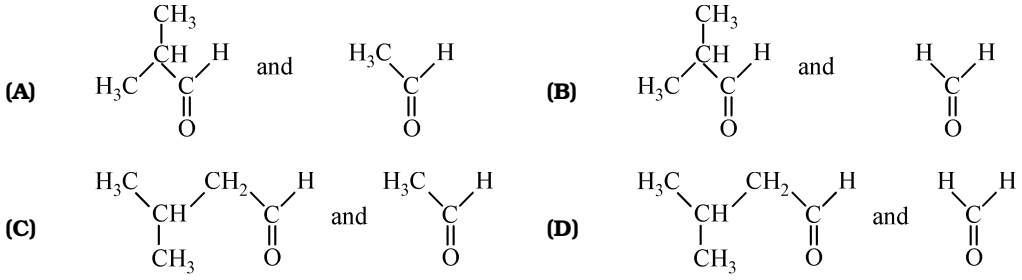


PARAGRAPH FOR QUESTIONS 81 - 83

Two aliphatic aldehydes P and Q react in the presence of aqueous K_2CO_3 to give compound R, which upon treatment with HCN provides compound S. On acidification and heating, S gives the product shown below :

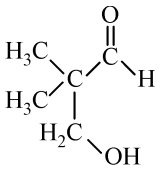


81. The compounds P and Q respectively are : **(2010)**

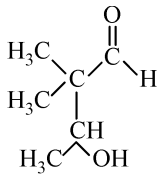


(A) **(B)** **(C)** **(D)**

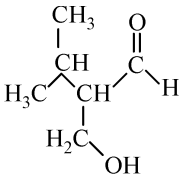
82. The compound R is : **(2010)**



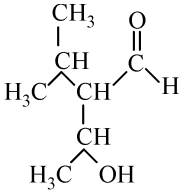
(A)



(B)

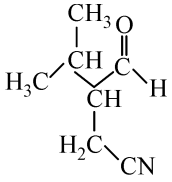


(C)

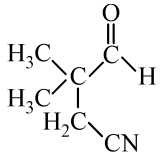


(D)

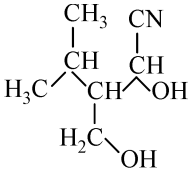
83. The compound S is : **(2010)**



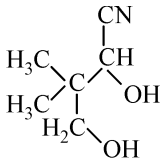
(A)



(B)



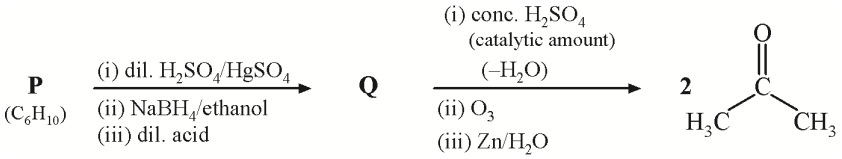
(C)



(D)

PARAGRAPH FOR QUESTIONS 84 - 85

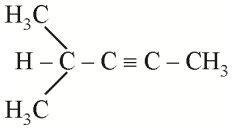
An acyclic hydrocarbon **P,** having molecular formula C_6H_{10} gave acetone as the only organic product through the following sequence of reactions, in which **Q** is an intermediate organic compound.



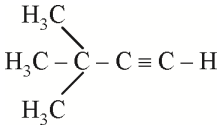
84. The structure of compound **P** is : **(2011)**

(A) $CH_3CH_2CH_2CH_2 - C \equiv CH$ **(B)** $H_3CCH_2 - C \equiv C - CH_2CH_3$

(C)

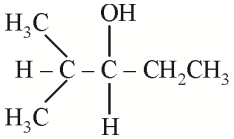


(D)

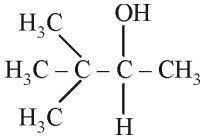


85. The structure of the compound **Q** is : **(2011)**

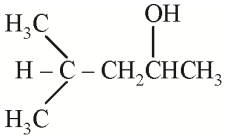
(A)



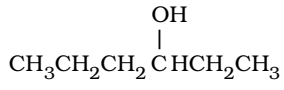
(B)



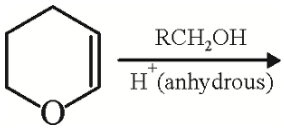
(C)



(D)

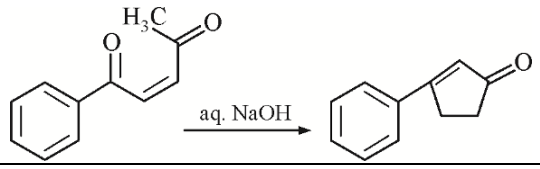
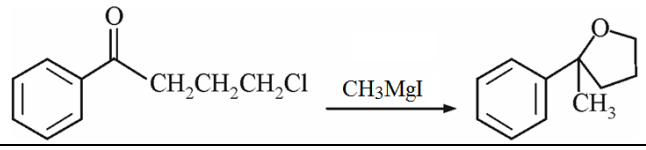
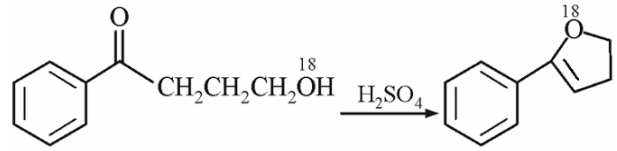
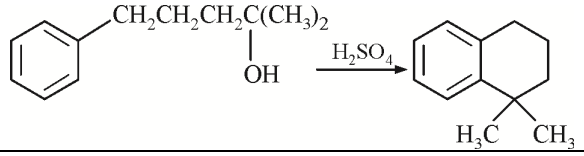


86. The major product of the following reaction is : **(2011)**

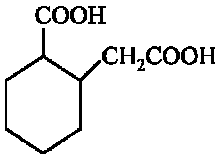


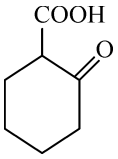
(A) A hemiacetal **(B)** An acetal **(C)** An ether **(D)** An ester

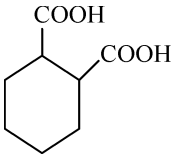
87. Match the reactions in Column I with appropriate types of steps/reactive intermediate involved in these reactions as given in Column II. **(2011)**

Column I		Column - II	
(A)		**(p)**	Nucleophilic substitution
(B)		**(q)**	Electrophilic substitution
(C)		**(r)**	Dehydration
(D)		**(s)**	Nucleophilic addition
		(t)	Carbanion

88. The compound that undergoes decarboxylation most readily under mild condition is: **(2012)**

(A) 

(B) 

(C) 

(D)