Date Planned : __ / __ / __	Daily Tutorial Sheet-9	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration :_____

106. $H_3C-\overset{\overset{O}{\|}}{C}-OH + C_2H_5{}^{18}OH \xrightarrow{Conc.H_2SO_4} (X)$

$H_3C-\overset{\overset{O}{\|}}{C}-OH + (CH_3)_3C-{}^{18}OH \xrightarrow{Conc.H_2SO_4} (Y)$

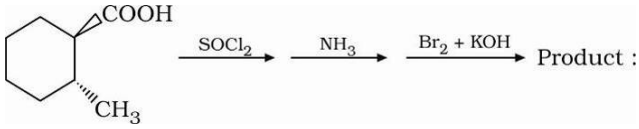
In the above reaction (*X*) and (*Y*) are respectively :

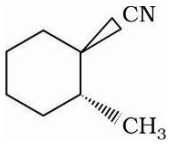
(A) $CH_3-\overset{\overset{O}{\|}}{C}-{}^{18}O-C_2H_5$ and $CH_3-\overset{\overset{O}{\|}}{C}-O-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

(B) $H_3C-\overset{\overset{O}{\|}}{C}-{}^{18}O-C_2H_5$ and $H_3C-\overset{\overset{O}{\|}}{C}-{}^{18}O-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

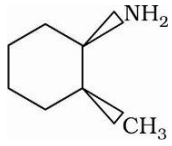
(C) $H_3C-\overset{\overset{O}{\|}}{C}-O-C_2H_5$ and $H_3C-\overset{\overset{O}{\|}}{C}-O-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

(D) $CH_3-\overset{\overset{O}{\|}}{C}-O-C_2H_5$ and $CH_3-\overset{\overset{O}{\|}}{C}-{}^{18}O-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

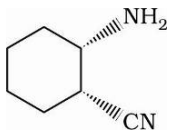
107. 



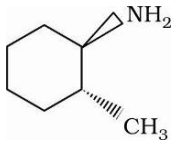
(A)



(B)

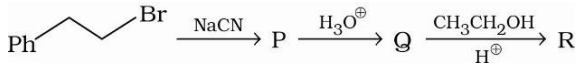


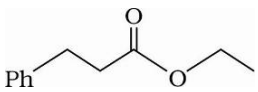
(C)



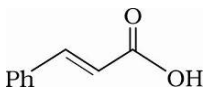
(D)

108. Find the structure of compound R :

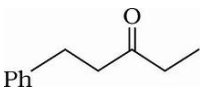




(A)

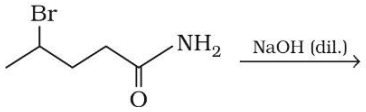


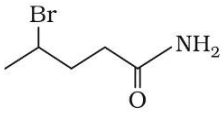
(B)



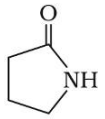
(C)

None of these
(D)

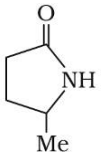
109.  Product formed will be :



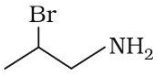
(A)



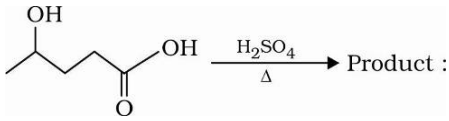
(B)



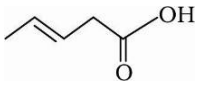
(C)

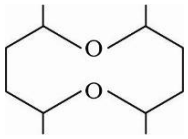


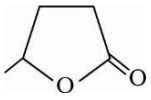
(D)

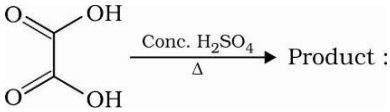
110. 

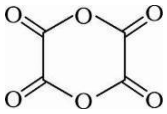
(A) $H_2C = CH - CH_2 - CH_2 - \overset{\overset{O}{\|}}{C} - OH$

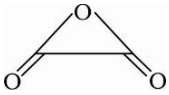
(B) 

(C) 

(D) 

111. 

(A) 

(B) 

(C) H_2O, CO_2 and CO

(D) HCOOH

112. In the given reaction :

$$CH_3CN \xrightarrow{CH_3Br/NaNH_2} CH_3CH_2CN\,,$$

intermediate is _____ and path is _____ :

(A) $\bar{C}H_2CN$, S_N1

(B) $\bar{C}H_2CN$, S_N2

(C) $\bar{N}H_2$, S_N1

(D) $\bar{C}H_3$, S_N2

***113.** Select correct statement for the following base-catalysed hydrolysis :

$$R - \overset{\overset{O}{\|}}{C} - \overset{18}{O} - CH_3 \xrightarrow{OH^{\ominus}} R - \overset{\overset{O}{\|}}{C} - O^{\ominus} + CH_3OH$$

(A) It is a nucleophilic acyl substitution (addition-elimination reaction)

(B) $\overset{18}{O}$ appears in methanol CH_3OH

(C) The reaction is not reversible

(D) $\overset{18}{O}$ appears is carboxylate ion

***114.** In Claisen condensation reaction :

(A) A proton is removed from the α -carbon to form a resonance-stabilized carbanion

(B) The carbanion acts as a nucleophile in a nucleophilic acyl substitution reaction with another ester molecule

(C) A new C – C bond is formed

(D) The product formed has an active methylene group

115. Ester $\xrightarrow{LiAlH_4} CH_3CH_2OH$ (only)

Ester $\xrightarrow[(ii)\ H_3O^+]{(i)\ NaOC_2H_5}$ A

A is :

(A) $CH_3\overset{O}{\overset{\|}{C}}CH_2\overset{O}{\overset{\|}{C}}OC_2H_5$

(B) $CH_3\overset{O}{\overset{\|}{C}}CH_2\overset{O}{\overset{\|}{C}}OH$

(C) $CH_3\overset{O}{\overset{\|}{C}}OH$

(D) None of the above