

Date Planned : __ / __ / __	Daily Tutorial Sheet-3	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration : _____

31. An ester (A) with molecular formula $C_9H_{10}O_2$ was treated with excess of CH_3MgBr and the complex so formed was heated with H_2SO_4 to give an olefin (B). Ozonolysis of (B) gave a ketone with molecular formula C_8H_8O which shows positive iodoform test. The structure of (A) is :

- (A)** $C_6H_5COOC_2H_5$ **(B)** $C_6H_5COOC_6H_5$
(C) $C_6H_5COOCH_3$ **(D)** $p-H_3CO-C_6H_4-COCH_3$

32. Which of the following diacid readily gives anhydride on heating?

- (A)** Fumaric acid **(B)** Maleic acid **(C)** Malonic acid **(D)** Terephthalic acid

33. $(CH_2CO)_2O + RMgX \xrightarrow{H_2O}$ Product ? $\left[(CH_2CO)_2O : \text{Succinic anhydride} \right]$

- (A)** $ROOC(CH_2)COOR$ **(B)** $RCOCH_2CH_2COOH$
(C) $RCOOR$ **(D)** $RCOOH$

34. Trans esterification is the process of :

- (A)** conversion of an aliphatic acid to ester
(B) conversion of an aliphatic alcohol to ester
(C) conversion of one ester to another ester
(D) conversion of an ester into its components namely acid and alcohol

35. Rate of reaction:



Is fastest when Z is _____ and slowest when Z is _____.

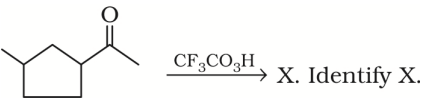
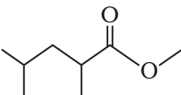
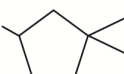
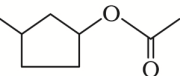
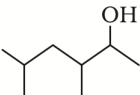

- (A)** Cl, OC_2H_5 **(B)** NH_4^+, Cl **(C)** Cl, NH_2 **(D)** $Cl, O-COCH_3$

36. $CH_3MgX \xrightarrow[\text{(Excess)}]{\begin{array}{c} 1. CH_3-C(=O)-OC_2H_5 \\ 2. H_3O^+ \end{array}} A \xrightarrow{Na} B \xrightarrow{CH_3Br} C$. The product C is :

- (A)** $CH_3-C(=O)-CH_3$ **(B)** $(CH_3)_3C-O-CH_3$
(C) $(CH_3)_3C-OH$ **(D)** $(CH_3)_2C=CH_2$

37. End product of the given reaction is : $CH_3CH_2COOH \xrightarrow[\text{red P}]{Cl_2} \xrightarrow{H_2O} X \xrightarrow{\text{Alc. KOH}}$

- (A)** $\begin{array}{c} CH_3CHCOOH \\ | \\ OH \end{array}$ **(B)** $\begin{array}{c} CH_2CH_2COOH \\ | \\ OH \end{array}$
(C) $CH_2=CHCOOH$ **(D)** $\begin{array}{c} CH_2CHCOOH \\ | \quad | \\ OH \quad OH \end{array}$

38. A nitrogen containing organic compound gave an oily liquid on heating with bromine and potassium hydroxide solution. On shaking the product with acetic anhydride, an antipyretic drug, (acetanilide) was obtained. The reactions indicates that the starting compound is :
(A) aniline **(B)** benzamide **(C)** acetamide **(D)** nitrobenzene
39. $\text{CH}_3\text{COOCH}_3 + \text{excess PhMgBr} \longrightarrow \text{product} \xrightarrow[\Delta]{\text{H}^+} \text{X}$
 The product X is :
(A) 1, 1-diphenylethanol **(B)** 1, 1-diphenylethene
(C) methyl phenylethanol **(D)** methyl phenylketone
40. Ethyl benzoate reacts with PCl_5 to give :
(A) $\text{C}_2\text{H}_5\text{Cl} + \text{C}_6\text{H}_5\text{COCl} + \text{POCl}_3 + \text{HCl}$ **(B)** $\text{C}_2\text{H}_5\text{Cl} + \text{C}_6\text{H}_5\text{COCl} + \text{POCl}_3$
(C) $\text{CH}_3\text{COCl} + \text{C}_6\text{H}_5\text{COCl} + \text{POCl}_3$ **(D)** $\text{C}_2\text{H}_5\text{Cl} + \text{C}_6\text{H}_5\text{COOH} + \text{POCl}_3$
41.  X. Identify X.
(A)  **(B)**  **(C)**  **(D)** 
42. The product of acid hydrolysis of P and Q can be distinguish by :
 $\text{P} = \text{H}_2\text{C} = \begin{matrix} \text{OCOCH}_3 \\ \text{CH}_3 \end{matrix}$, $\text{Q} = \text{H}_3\text{C} - \text{CH} = \text{CH} - \text{OCOCH}_3$
(A) Lucas reagent **(B)** 2, 4-DNP
(C) Fehling's solution **(D)** FeCl_3
43. When an acyl chloride is reacted with phenol in presence of pyridine, the product is an : 
(A) ester **(B)** anhydride **(C)** alkene **(D)** aldehyde
44. Acetamide and ethyl amine are distinguished by reacting with :
(A) Br_2 water **(B)** acidic KMnO_4
(C) aq. NaOH and heat **(D)** aq. HCl and heat
45. The refluxing of $\text{Me}_2\text{N} - \text{COMe}$ in acid gives :
(A) $\text{Me}_2\text{NH} + \text{CH}_3\text{COOH}$ **(B)** $\text{Me}_2\text{N} - \text{COOH} + \text{CH}_4$
(C) $\text{MeOH} + \text{CH}_3\text{CONH}_2$ **(D)** $\text{CH}_3\text{CH}_2\text{NH}_2 + \text{CH}_3\text{COOH}$