

Single Correct Answer Type

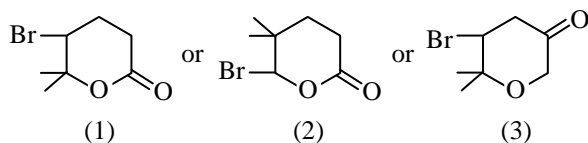
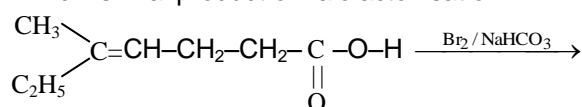
- Which of the following products is formed when adipic acid is heated -
 (A) $\begin{array}{c} \text{CH}_2-\text{CH}_2 \\ | \quad | \\ \text{CH}_2-\text{CH}_2 \end{array} \text{O}$ (B) $\begin{array}{c} \text{CH}_2-\text{CH}_2 \\ | \quad | \\ \text{CH}_2-\text{CH}_2 \end{array} \text{C}=\text{O}$ (C) $\begin{array}{c} \text{CH}_2-\text{CH}_2\text{CO} \\ | \quad | \\ \text{CH}_2-\text{CH}_2\text{CO} \end{array} \text{O}$ (D) $\begin{array}{c} \text{CH}_2-\text{CH}_2\text{COOH} \\ | \quad | \\ \text{CH}_2-\text{CH}_2\text{COOH} \end{array}$
- Malonic acid and succinic acid are distinguished by -
 (A) Heating (B) NaHCO_3 (C) Both A & B (D) None of these
- Hydrolysis of 1,1, 1-trichloro derivative (A) of alkane gives a molecule (B) on alkaline hydrolysis which produces red coloration with aqueous FeCl_3 . The compound (A) is -
 (A) $\text{CH}_3\text{CH}_2\text{CCl}_3$ (B) CH_3CCl_3 (C) CHCl_3 (D) None
- Which of the following is the best representation of the structure of the carboxylate ion -
 (A) $\text{R}-\text{C} \begin{array}{l} \nearrow \text{O}^{\delta+} \\ \searrow \text{O}^{\delta-} \end{array}$ (B) $\text{R}-\text{C} \begin{array}{l} \nearrow \text{O}^{\delta-} \\ \searrow \text{O}^{\delta-} \end{array}$ (C) $\text{R}-\text{C} \begin{array}{l} \nearrow \text{O}^{\delta+} \\ \searrow \text{O}^{\delta+} \end{array}$ (D) None of these
- Hydrolysis of an ester gives acid A and alcohol B. The acid reduces Fehling's solution. Oxidation of alcohol B gives acid A. The ester is -
 (A) Methyl formate (B) Ethyl formate (C) Methyl acetate (D) Ethyl acetate
- Which one of the following on oxidation will not give a carboxylic acid with the same number of carbon atoms -
 (A) CH_3COCH_3 (B) $\text{CCl}_3\cdot\text{CH}_2\text{CHO}$ (C) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ (D) $\text{CH}_3\text{CH}_2\text{CHO}$
- Identify Z in the sequence

$$\text{CH}_3\text{COONH}_4 \xrightarrow[\text{(ii) P}_2\text{O}_5]{\text{(i) heat}} \text{Y} \xrightarrow{\text{H}_2\text{O}(\text{H}^+)} \text{Z}$$
 (A) $\text{CH}_3\text{CH}_2\text{CONH}_2$ (B) CH_3CN (C) CH_3COOH (D) $(\text{CH}_3\text{CO})_2\text{O}$
- When oxalic acid is heated, which one of the following is formed along with CO_2 -
 (A) Acetic acid (B) Glyceric acid (C) Formic acid (D) None of these
- In Quick Vinegar Process, the aerial oxidation of ethyl alcohol to acetic acid is brought about by -
 (A) Acetic (B) Maltase (C) Invertase (D) *Mycoderma aceti*
- Sodium salt of formic acid on strong heating followed by acidification gives-
 (A) Formic acid (B) Oxalic acid (C) Formaldehyde (D) Acetaldehyde
- Phenol is a weaker acid than acetic acid because-
 (A) Phenoxide ion is better stabilized by resonance than acetate ion
 (B) Acetate ion is better stabilized by resonance than phenoxide ion
 (C) Phenol is less soluble in water than acetic acid
 (D) Both phenoxide ion and acetate ion are equally stable
- Which of the following is the weakest acid ?
 (A) Cl_3CCOOH (B) Cl_2CHCOOH (C) ClCH_2COOH (D) CH_3COOH
- X and Y in the reaction sequence $\text{R}-\text{C}\equiv\text{N} \xrightarrow{\text{H}_3\text{O}^{\oplus}} \text{X} \xrightarrow{\text{diazomethane}} \text{Y}$, are given by the set-
 (A) Carboxamide, Carbonitrile (B) Carboxylic acid, Carbonitrile
 (C) RCOOH , RCOOCH_3 (D) RCONH_2 , RCOCH_3

14. In the electrolysis of the aqueous solution of $\text{CH}_3\text{CH}_2\text{COONa}$, anion goes to anode the possibility of formation of following compounds takes place -
- (A) $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$ (B) $\text{CH}_2 = \text{CH}_2, \text{CH}_3 - \text{CH}_3$
 (C) $\text{CH}_3\text{CH}_2\text{COOC}_2\text{H}_5$ (D) All the above
15. Which of the following organic acid decolourises bromine water as well as forms anhydride -
- (A) $\text{HOOC} - \text{COOH}$ (B) $\text{HOOC} - \text{CH}_2 - \text{COOH}$
 (C) $\begin{array}{c} \text{H}-\text{C}-\text{COOH} \\ || \\ \text{H}-\text{C}-\text{COOH} \end{array}$ (D) $\begin{array}{c} \text{H}-\text{C}-\text{COOH} \\ || \\ \text{HOOC}-\text{C}-\text{H} \end{array}$
16. The general formula of dicarboxylic acid is -
- (A) $(\text{COOH})_2$ (B) $(\text{CH}_2)_n(\text{COOH})_2$
 (C) $(\text{CH}_2)_{n-2}(\text{COOH})_2$ (D) $(\text{CH}_2)_{n-1}(\text{COOH})_2$
17. The product A, B and C in the reaction sequence
- $$\begin{array}{c} \text{H}-\text{C}-\text{O})_2\text{Ca} \\ || \\ \text{O} \end{array} \xrightarrow{\Delta} \text{A} \xrightarrow{\text{NaOH}} \text{B} \xrightarrow[360^\circ\text{C}]{\text{Heat}} \text{C}$$
- are -
- (A) $\text{HCHO}, \text{HCOONa}, \text{CH}_3\text{OH}$ (B) $\text{HCHO}, \text{Na}_2\text{CO}_3, \text{NaHCO}_3$
 (C) $\text{HCHO}, \text{HCOONa}, (\text{COONa})_2$ (D) $\text{HCHO}, \text{HCOONa}, \text{Na}_2\text{CO}_3$
18. In a set of the given reactions, acetic acid yields a product C -
- $$\text{CH}_3\text{COOH} + \text{PCl}_5 \rightarrow \text{A} \xrightarrow[\text{Anhy. AlCl}_3]{\text{C}_6\text{H}_6} \text{B} \xrightarrow[\text{Ether}]{\text{C}_2\text{H}_5\text{MgBr}} \text{C}$$
- Product C would be -
- (A) $\text{CH}_3\text{CH}(\text{OH})\text{C}_2\text{H}_5$ (B) $\text{CH}_3\text{COC}_6\text{H}_5$
 (C) $\text{CH}_3\text{CH}(\text{OH})\text{C}_6\text{H}_5$ (D) $\begin{array}{c} \text{C}_2\text{H}_5 \\ | \\ \text{CH}_3-\text{C}-(\text{OH})\text{C}_6\text{H}_5 \end{array}$
19. Lactic acid, $\text{CH}_3\text{CH}(\text{OH})\text{COOH}$ molecule shows -
- (A) Geometrical isomerism (B) Metamerism
 (C) Optical isomerism (D) Tautomerism
20. Formic acid and formaldehyde can be distinguished by treating with -
- (A) Benedict's solution (B) Tollen's reagent
 (C) Fehling's solution (D) NaHCO_3

Numerical based

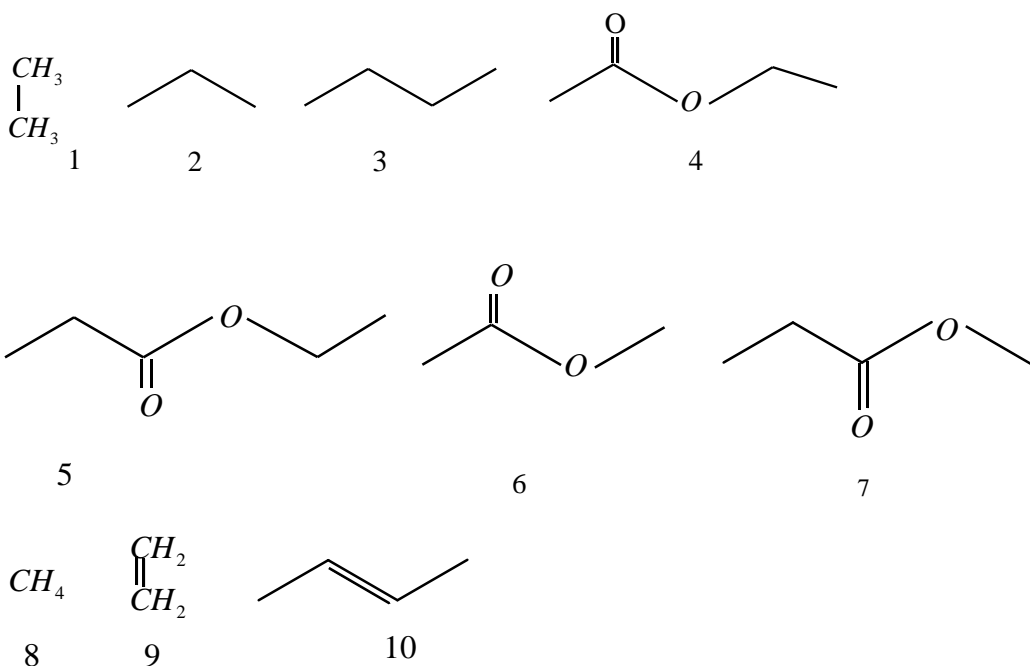
21. Which is final product of halolactonisation ?



22. How many of the following compounds will give CO_2 gas with NaHCO_3 ?
 RSO_3H , RCOOH , Phenol, H_2O , Picric acid, HClO_4 , HCl .

23. $\text{H}-\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-(\text{CH}_2)_n-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{H} \xrightarrow{\Delta}$ Product, At what value of (n) above compound will not evolve CO_2 gas.

24. If an aqueous solution containing both potassium ethanoate and potassium propanoate is subjected to Kolbe's electrolysis, how many products from the list below would be formed?



25. x mole $\text{CH}_3\text{COOC}_2\text{H}_5 \xrightarrow[2)\text{H}_3\text{O}^+]{1)\text{1moleLiAlH}_4} 2x$ mole $\text{CH}_3\text{CH}_2\text{OH}$ x value is

KEY

1.	B	2.	A	3.	B	4.	B	5.	A
6.	A	7.	C	8.	C	9.	D	10.	B
11.	B	12.	D	13.	C	14.	D	15.	C
16.	B	17.	C	18.	D	19.	C	20.	D
21.	1	22.	5	23.	2	24.	9	25.	2

* *Wish You^{est} all the Best* *