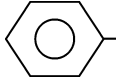
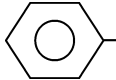
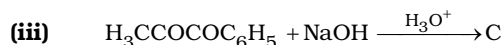
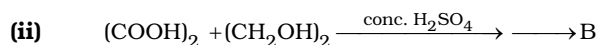
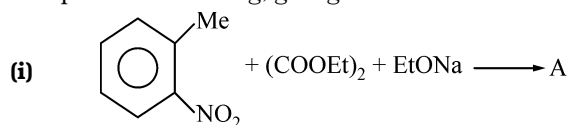


Date Planned : __ / __ / __	Daily Tutorial Sheet-2	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration : _____

16. The sodium salt of a carboxylic acid, A was produced by passing a gas, B into an aqueous solution of caustic alkali at an elevated temperature and pressure. A, on heating in presence of sodium hydroxide followed by treatment with sulphuric acid gave a dibasic acid, C. A sample of 0.4 g of acid C, on combustion gave 0.08g of water and 0.39 g of carbon dioxide. The silver salt of the acid C weighing 1.0 g on ignition yielded 0.71 g of silver as residue. Identify A, B and C. (1990)
17. How will you bring about the following conversion?  
"Ethanoic acid to a mixture of methanoic acid and diphenyl ketone." (1990)
18. The boiling point of propanoic acid is less than that of n-butyl alcohol, an alcohol of comparable molecular weight. (F/T) (1991)
19. Arrange the following as stated :  
"Increasing order of acidic strength."  
 $\text{ClCH}_2\text{COOH}$ ,  $\text{CH}_3\text{CH}_2\text{COOH}$ ,  $\text{ClCH}_2\text{CH}_2\text{COOH}$ ,  $(\text{CH}_3)_2\text{CHCOOH}$ ,  $\text{CH}_3\text{COOH}$  (1991)
20. In the following identify the compounds/reaction conditions represented by the alphabets A, B, and C :  
 $\text{C}_6\text{H}_5\text{COOH} \xrightarrow{\text{PCl}_5} \text{A} \xrightarrow{\text{NH}_3} \text{B} \xrightarrow{\text{P}_2\text{O}_5} \text{C}_6\text{H}_5\text{CN} \xrightarrow{\text{H}_2/\text{Ni}} \text{C}$  (1991)
21. When propionic acid is treated with aqueous sodium bicarbonate,  $\text{CO}_2$  is liberated. The C of  $\text{CO}_2$  comes from : (1992)
- (A) methyl group (B) carboxylic acid group  
(C) methylene group (D) bicarbonate group
22. Complete the following sequence of the reactions with appropriate structures : (1992)
- (i)   $\xrightarrow[\text{H}_2\text{SO}_4]{\text{Fuming}}$  .....  $\xrightarrow[2. \text{H}^+]{1. \text{NaOH (Fuse)}}$  .....
- (ii)   $\xrightarrow{\text{P}_2\text{O}_5}$  .....  $\xrightarrow[\Delta]{\text{H}^+, \text{H}_2\text{O}}$  .....
23. Complete the following reaction with appropriate structure. (1995)
- $\text{C}_6\text{H}_5\text{CHO} + \text{CH}_3\text{COOC}_2\text{H}_5 \xrightarrow[\text{heat}]{\text{NaOC}_2\text{H}_5 \text{ in absolute } \text{C}_2\text{H}_5\text{OH}}$
24. Complete the following sequence of reactions with appropriate structures. (1995)
- $\text{CH}_3 - \text{CH}_2 - \text{COOH} \xrightarrow[\text{Br}_2]{\text{Red - P}} \text{A} \xrightarrow[(\text{ii}) \text{H}^+]{(\text{i}) \text{Alc. KOH (excess)}} \text{B}$
25. Which of the following carboxylic acids undergoes decarboxylation easily? Explain briefly. (1995)
- (i)  $\text{C}_6\text{H}_5\text{COCH}_2\text{COOH}$  (ii)  $\text{C}_6\text{H}_5\text{COCOOH}$   
(iii)  $\text{C}_6\text{H}_5\text{CH(OH)COOH}$  (iv)  $\text{C}_6\text{H}_5\text{CH(NH}_2\text{)COOH}$
26. A hydrocarbon A of the formula  $\text{C}_8\text{H}_{10}$ , on ozonolysis gives compound  $\text{B}(\text{C}_4\text{H}_6\text{O}_2)$  only. The compound B can also be obtained from the alkyl bromide  $\text{C}(\text{C}_3\text{H}_5\text{Br})$  upon treatment with magnesium in dry ether followed by reaction with carbondioxide and acidification. Identify A, B and C and also give equations for the reactions. (1996)

27. Complete the following, giving the structures of the principal organic products.

(1997)



28. **Statement-I :** Acetic acid does not undergo haloform reaction.

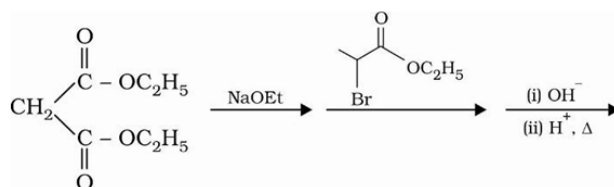
(1998)

**Statement-II :** Acetic acid has no alpha hydrogen.

- (A) Statement-I is True, Statement-II is True and Statement-II is a correct explanation for Statement-I  
(B) Statement-I is True, Statement-II is True and Statement-II is NOT a correct explanation for Statement-I  
(C) Statement-I is True, Statement-II is False  
(D) Statement-I is False, Statement-II is True

29. Identify all the products formed in the following reaction sequence and explain briefly the formation of the products.

(1999)



30. Write the structures of the products A and B.

(2000)

