



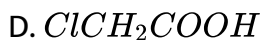
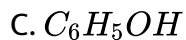
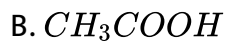
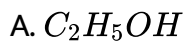
CHEMISTRY

NCERT - NCERT CHEMISTRY(TELUGU)

CARBOXYLIC ACIDS

Self Evaluation A Choose The Correct Answer

1. Which of the following is least acidic



Answer:



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2. The weakest acid among the following

A. Acetic acid

B. Phenol

C. Water

D. Acetylene

Answer:



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3. Ester formation involves the reaction of

A. an aldehyde and a ketone

B. An alcohol with RMgX

C. Two molecules of an acid with dehydrating agent

D. An acylhalide with an alcohol

Answer:



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4. Heating a mixture of sodium acetate and soda lime gives

A. methane

B. ethane

C. acetic acid

D. benzene

Answer:



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5. The acid which reduces Tollen's reagent is

- A. acetic acid
- B. benzoic acid
- C. formic acid
- D. oxalic acid

Answer:



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6. The IUPAC name of $CH_3 - CH_2 - \overset{\overset{CH_3}{|}}{CH} - COOH$ is

- A. α - methyl butyric acid
- B. 3-methyl butanoic acid
- C. 2-methyl butanoic acid
- D. Iso pentanoic acid

Answer:



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7. The Isomerism exhibited by CH_3CH_2COOH and CH_3COOCH_3

is

A. metamerism

B. position

C. chain

D. functional

Answer:



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8. The acid that cannot be prepared by Grignard reagent

- A. acetic acid
- B. formic acid
- C. butyric acid
- D. benzoic acid

Answer:



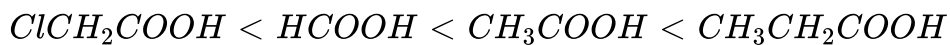
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9. Which order of arrangement is correct in terms of the strength of the acid

A.



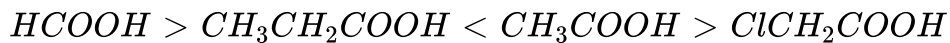
B.



C.



D.



Answer:



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10. The compound which undergoes intramolecular dehydration with P_2O_5 is

A. acetic acid

B. formic acid

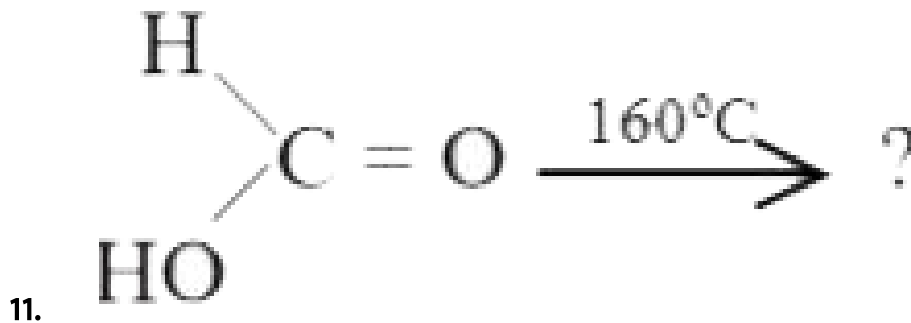
C. propionic acid

D. Butyric acid

Answer:

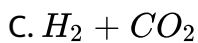
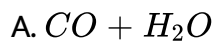


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product is

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Answer:



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12. When chlorine is passed through acetic acid in presence of red P, it forms.

- A. acetyl chloride
- B. Trichloro acetaldehyde
- C. Trichloro acetic acid
- D. Methyl chloride

Answer:



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13. Which of the following compounds will react with $NaHCO_3$ solution to give sodium salt and CO_2 ?

- A. acetic acid
- B. n-hexanol

C. phenol

D. both (a) and (c)

Answer:



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14. When propanoic acid is treated with aqueous sodium bicarbonatate, CO_2 is liberated. The "C" of CO_2 comes from

A. methyl group

B. carboxylic acid group

C. methylene group

D. bicarbonate

Answer:



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15. Carboxylic acids are more acidic than phenol and alcohol because of

- A. inter molecular hydrogen bonding
- B. formation of dimers
- C. highly acidic hydrogen
- D. greater resonance stabilisation of their conjugate base

Answer:



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16. Among the following the strongest acid is

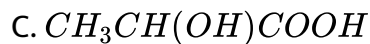
- A. ClCH_2COOH
- B. Cl_3CCOOH
- C. CH_3COOH
- D. Cl_2CHCOOH

Answer:



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17. Which of the following compound is optically active ?



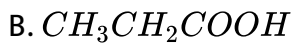
Answer:



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18. $CH_3CH(OH)COOH \xrightarrow{H_2O_2 / Fe^{2+}}$? The product is





Answer:



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19. The compound found in some stony deposit in kidneys is

A. potassium oxalate

B. oxalic acid

C. potassium succinate

D. calcium oxalate

Answer:



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20. Ethylene cyanide on hydrolysis using acid gives

- A. oxalic acid
- B. succinic acid
- C. adipic acid
- D. propionic acid

Answer:



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Self Evaluation B Answer In One Or Two Sentences

1. What are carboxylic acids ?



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2. Give the source and trivial names of

(i) C_3H_7COOH and (ii) $HCOOH$.



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3. How is the conversion of acetonitrile to acetic acid effected ?



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4. The boiling points of carboxylic acids are higher than those of alcohols. Explain with suitable examples.



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5. Formic acid reduces Tollen's reagent, but acetic acid does not-Give reasons.



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6. Write two tests of carboxylic acid.



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7. Give the resonance structure of carboxylate anion.



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8. Mention the inductive effect in monochloro acetic acid.



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9. Write a note on esterification reaction with an example.



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10. What happens when calcium salt of acetic acid is distilled.

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11. Mention the uses of oxalic acid.

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12. What is the action of dilute sulphuric acid with lactic acid ?

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13. Give the structure of lactyl chloride and lactide.

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1. How is oxalic acid manufactured from sodium formate ?



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2. Explain the isomerism exhibited by carboxylic acids.



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3. Write a note on the acidic nature of acetic acid.



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4. Give the mechanism involved in the esterification of a carboxylic acid with alcohol.



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5. Explain the role of electron withdrawing and electron releasing groups on the acidity of carboxylic acids.



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6. Account for reducing nature of Formic acid.



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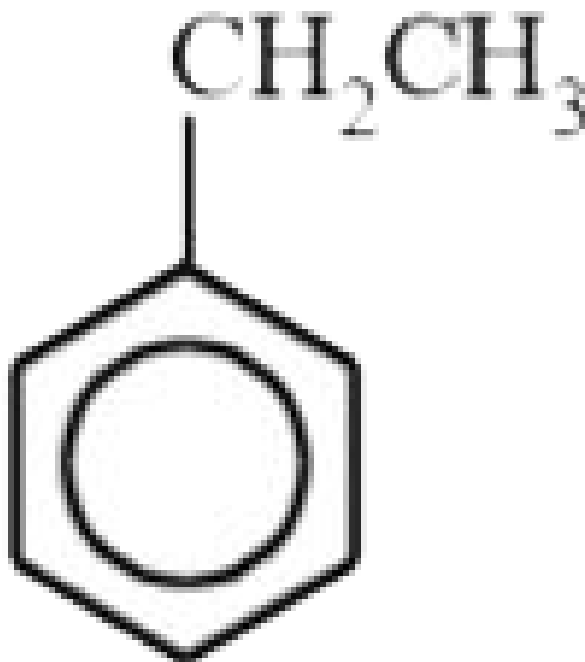
7. Explain the following :

- (i) Chloro acetic acid is stronger acid than acetic acid.
- (ii) Fluoro acetic acid is stronger acid than chloro acetic acid.
- (iii) Formic acid is stronger acid than acetic acid.



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8. How is benzoic acid obtained from



(a)

(b) phenyl

cyanide (c) carbon dioxide



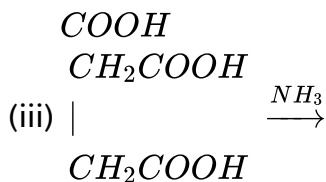
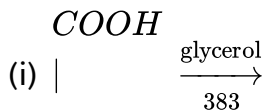
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9. How do you distinguish formic acid from acetic acid ?



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10. Write the products in each of the following.



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11. How are the following conversions carried out ?

(i) Salicylic acid \rightarrow aspirin

(ii) Salicylic acid \rightarrow methyl salicylate

(iii) Lactic acid \rightarrow lactide



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12. What happens when lactic acid is

(i) treated with dilute H_2SO_4

(ii) heated alone

(iii) oxidised with alkaline $KMnO_4$



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13. Give the uses of (a) oxalic acid and (b) salicylic acid.



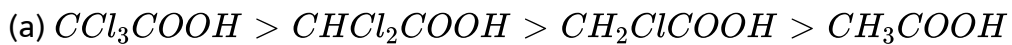
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14. Outline the mechanism of (a) formation of ethylacetate from acetic acid and ethyl alcohol. (b) Hydrolysis of ethyl cyanide to propionic acid.



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15. Explain the order of strength of the following acids.



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