

SBOA SCHOOL + JUNIOR COLLEGE

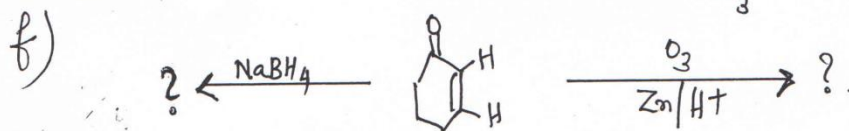
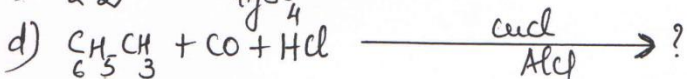
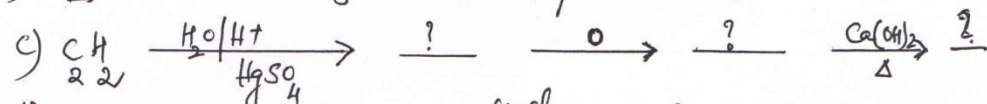
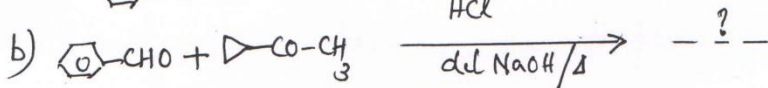
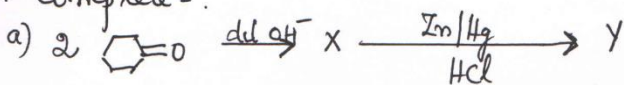
APPLICATION QUESTIONS

CHEMISTRY

Std. XII

ALDEHYDES, KETONES + CARBOXYLIC ACIDS

I. Complete -:



II Accomplish the Conversions

- (I) Formaldehyde to acetaldehyde (II) benzoic acid to benzyl chloride
 (III) Ethene to Succinic acid (IV) Propanoic acid to propenoic acid

III. How does $\text{HOOC}-\text{CH}=\text{CH}-\underset{\text{OCH}_3}{\text{CH}}-\text{CHO}$ react with following

- a) dilute alkaline KMnO_4
 b) dilute Na_2CO_3
 c) Bromine water
 d) Tollens reagent

IV. Compound P ($\text{C}_3\text{H}_6\text{O}$) is resistant to oxidation and gives Q on reduction. On treating with HBr Q gives R. The compound R forms Grignard reagent which reacts with P to give S. Identify P, Q, R and S and write equations.

V. An organic compound A reacts with ethanol to give B and C. On hydrolysis in an acidic medium C gives B and D. Oxidation of D gives B, which is a carboxylic acid. On treatment with Ca(OH)_2 B forms a salt, which on

Strong heating gives E. Identify the compounds and complete the reaction sequence

1. An aromatic compound X (C_8H_8O) gave positive 2,4-DNP test. It also gave a yellow precipitate Y on warming with I_2 and alkali. X does not respond to Tollen's test and Fehling's test. On drastic oxidation with alkaline $KMnO_4$, X forms Z which is also formed along with Y when warmed with I_2 and alkali. Identify the compounds and write equations

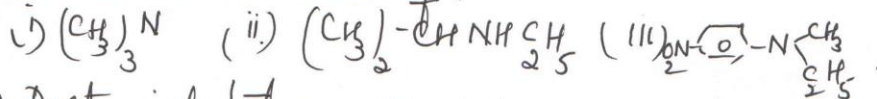
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SBOA SCHOOL + JUNIOR COLLEGE
 Assignment Topic Amines -
 CHEMISTRY

CLASS - XII

Marks :
 Time : 45 min

1. Write IUPAC names of.



2. Distinguish between the pairs of organic compounds.

- (a) Ethylamine and aniline (b) Dimethylamine and trimethylamine
 (c) N-methyl aniline + N,N dimethyl aniline

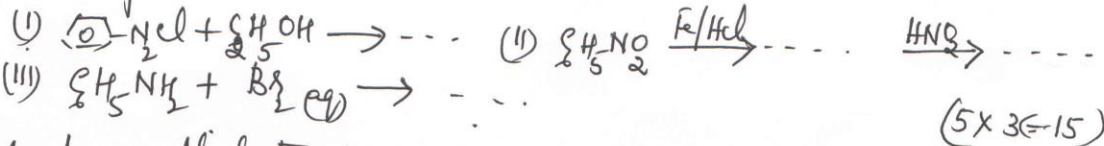
3. Explain the following

- a) Ammonolysis of alkyl halides (b) Gattermann reaction
 c) Coupling reaction

4. Arrange in increasing order of property indicated

- a) Aniline, ethylamine, p-nitro aniline, N-methyl aniline (pKa)
 b) CH_3NH_2 , $(\text{CH}_3)_2\text{NH}$, $(\text{CH}_3)_3\text{N}$, NH_3 (aq medium) (kb)

5. Complete



6. Accomplish the conversion

- (i) Ethylamine to methylamine (ii) Aniline to 1,3,5 tribromobenzene
 (iii) Chloroethane to propanamine

7. Account for

- a) Aniline cannot be prepared by Gabriel's synthesis
 b) Aryl diazonium salts are stable
 c) Aniline is acylated before converting it to monobromoaniline
 d) Amines are nucleophiles
 e) Ethylamine is water soluble while aniline is sparingly water soluble.

(2X5=10)