



امتحان

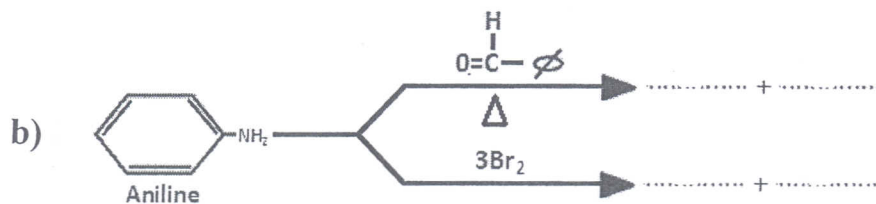
 <p>Academic Year : 2015-2016 Second Term Date : 5/6/2016 Time : 2 hrs</p>	<p>Final Exam : Special Organic Chemistry Agricultural Biotechnology Program (3rd Level) Code No. : Chm305 Total Degree : 60 The exam in one paper on two faces</p>	 <p>Mansoura University Faculty of Agriculture Agric. Chem. Dept.</p>
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Answer the following questions :

Question 1: (15 degree/3 for each part)

- 1- Explain: Phenol is weak acidic in nature.
- 2- Give two tests to distinguish between phenol and ethyl alcohol.
- 3- Write the molecular formula of any three from the following:
 - a) Catechol
 - b) Resorcinol
 - c) Picric acid
 - d) Hydroquinone
- 4- Describe the preparation of phenol from:
 - a) Cumene by oxidation, 130 °C , Catalyst.
 - b) Benzene diazonium chloride by distillation with steam.

5- Complete the following reactions:



Question 2: (15 degree/5 for each part)

- 1- Give four important physical properties of aniline
- 2- Discuss the importance of acetylation reaction in aromatic primary amine compound such as Aniline.
- 3- Ethyl dimethyl isobutyl ammonium hydroxide:

Describe the steps of Hofmann elimination reaction for tertiary amine on the previous compound.

Question 3: (15 degree/7.5 for each part)

1- Write the physiological activity of the following alkaloids and their chemical structures:

a) Morphine

b) Cocaine

2- Explain general scheme for extraction of Alkaloids from the plant.

Question 4: (15 degree/5 for each part)

1- From preparation of Alkane thiol, complete the following reactions with nomenclature of the main product:



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2- Nomenclature the sulphur compounds corresponding to the following oxygenated compounds:



3- How can you prepare of mono, di and triethylphosphite by using sodium phosphite salt (Na_3PO_3) and ethyl bromide.

with our best wishes

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