



Academic Year : 2014-2015
Second Term
Date : 24/5/2015
Time : 2 hrs

Final Exam : Special Organic Chemistry
Agricultural Biotechnology Program
(3rd Level)
Total Degree : 60
The exam in one paper on two faces



Mansoura University
Faculty of Agriculture
Agric. Chem. Dept.

Answer the following questions :

Question 1: (20 degree/5 for each part)

1- Describe the physical characteristics of phenols.

2- How will you convert phenol into the following compounds :

(i) 2,4,6-tribromo phenol

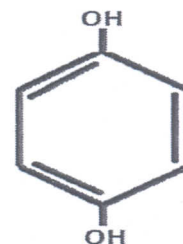
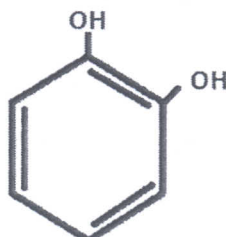
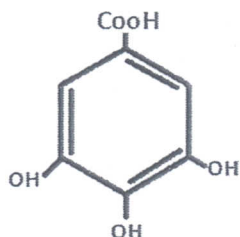
(ii) Cyclohexanol

(iii) Aniline

[by using the following reagents: excess of bromine , NH_3 in the presence of ZnCl_2 , hydrogen in the presence of Ni , $\Delta(150-175^\circ\text{C})$]

3- What is the meaning of phenolic hydroxyl group?

4- Write the common and official names of the following compounds :



Question 2: (12 degree/3 for each part)

1- Describe two methods preparation of phenol.

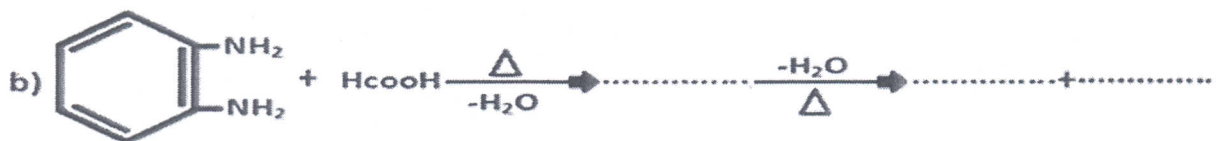
2- Give three uses of Quinol .

3- Assign the structures and names of the following aromatic amines :

(a) m-chloro aniline

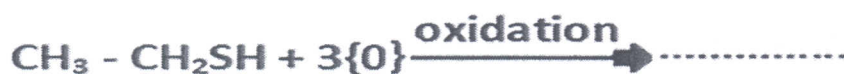
(b) p-phenylenediamine

4- Complete the following reactions with nomenclature of the main compounds :



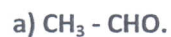
Question 3: (16 degree/4 for each part)

1- Write the products of these equations :



2- What are the names of sulphur compounds corresponding to the following oxygenated

compounds:



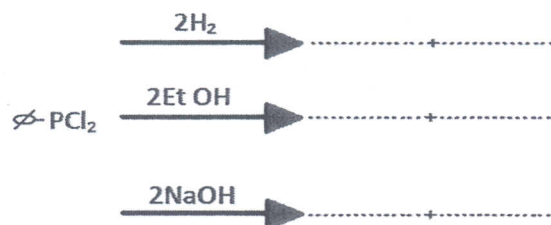
3- What is the physiological activity of caffeine ? write the structure formula.

4- Give a precise definition of the term alkaloids.

Question 4: (12 degree/6 for each part)

1- How can you prepare of mono , Di and triethyl phosphate by using sodium phosphate and ethyl bromide.

2- Complete the following equations to form aryl phosphine components with nomenclature the products :



With our best wishes

prof.Dr/Mostafa ibrahim sanad

prof.Dr/Hassan barakat hamed