**University of Mosul** 

**College: Education College for Girls** 

**Dept.: Chemistry Second Class** 

**Subject: Organic Chemistry** 



Mid. Exam. Time: 1.5 hours Date: 22 / 1 /2014

Lecturer: Dr.Talat R. Al-Ramadhany

**Code: EGCH14\_ M 2011** 

Q. 1/ Name of  $\underline{Five}$  of the following compounds:

(10M)

## Q.2/ Explain the following (Support your answer by structure and chemical equations): (20 M)

- **i.**The low reactivity of aryl halides toward nucleophilic substitution attributed to two factors?
- ii. Synthesis of Phenol stars with Cumene?
- iii. Sandmeyer reaction?
- iv.Reimer-Tiemann reaction?

## Q. 3/ Complete the following paragraphs:

(10M)

- a) Aryl halides are insoluble in ...... but soluble in ......
- **b**) The electron-withdrawing groups ......the acidity of Phenols, but the electron-donating groups ...... the acidity of Phenols.
- c) To obtain mononitrophenols, it is necessary to use ...... at ......temperature.
- **d)** The common names of aldehydes are derived from the names of the corresponding ......
- e) Most phenols are considerably ..... acids than carboxylic acids.

To be continued

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## **Q. 4**/ Complete the following equations:

(10M)

i) 
$$\bigcirc$$
 OH + ?  $\stackrel{?}{\longrightarrow}$   $\bigcirc$  O-C

ii) 
$$\sim$$
 OCH<sub>3</sub>  $\sim$  NaNH<sub>2</sub>  $\sim$  ?

iii) 
$$\stackrel{\text{CI}}{\longleftarrow} NO_2$$
 +  $NH_3 \stackrel{170^{\circ}\text{C}}{\longrightarrow}$  ?

$$\mathbf{iv}) \quad \stackrel{\mathsf{Br}}{\longleftarrow} \quad + \; ? \quad \stackrel{?}{\longrightarrow} \quad \stackrel{\mathsf{Br}}{\longleftarrow} \quad \stackrel{\mathsf{C}_2\mathsf{H}_5}{\longleftarrow} \quad + \quad \stackrel{\mathsf{Br}}{\longleftarrow} \quad \stackrel{\mathsf{$$

## GOOD LUCK