Ministry of Higher Education & Scientific Research Al-Muthanna University College of Science Department of Chemistry



Subject: Organic Chem. Il Stage: The Second

Date: / /201 Time: Three hours

(( Final exam of the second semester))

Academic year 2016 -2017

45

Q3: Use benzene and any inorganic reagent to prepare **FOUR** of the following compounds:

(14 Marks)

Q4: Give the chemical structure of **FIVE** of the following compounds:

- 1) Toluene
- 2) Phenathrene
- 3) Benzyl chloride

- 4) Thiophene
- 5) Aniline

6) Salicylic acid

(5 Marks)

Q5: Give the mechanism of the following reaction:

(5 Marks)

**Good Luck**