



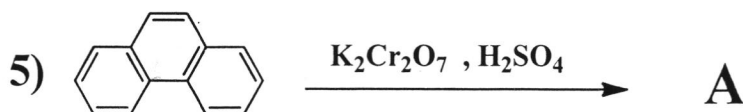
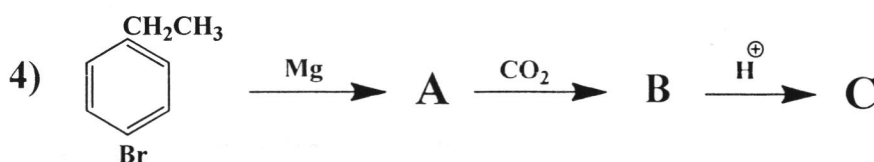
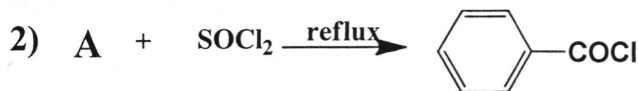
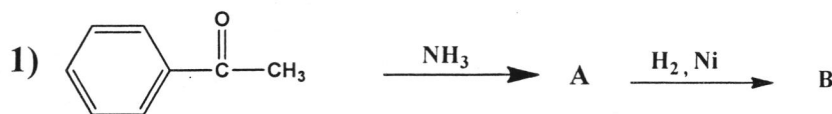
University of Technology
Department of Applied Sciences 2015/2016
Final Exam



Subject organic Chemistry Class 3rd year
Branch Applied chemistry Time 3 hours
Examiner Ass.prof.Mohammed S. Ali Date 8-9-2016

Note: answer four questions only.

Q1\ Complete the following reactions : (25 marks).



Q2\ (25 marks)

A) Complete the reaction and give the mechanism?



B) prepare phenanthrene from naphthalene and succinic anhydride and any reagent?



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Q3\

(25 marks)

A) Define the following terms :

1) Enantiomers 2) optically active substance

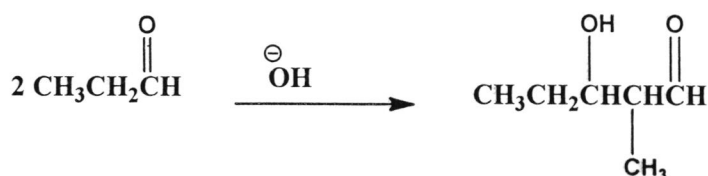
B) Draw and specify as R or S the enantiomers of :

a) $\text{CH}_3\text{CBrClCH}=\text{CH}_2$ b) $\text{HOOCCHOHCH}_2\text{COOH}$ c) $\text{CH}_3\text{CH}(\text{NH}_2)\text{COOH}$

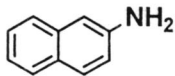
Q4\

(25 marks)

A) Write the mechanism of the following reaction:



B) Name the following compounds ?

1) HCOOH 2) CH_3CONH_2 3) $\text{C}_6\text{H}_5\text{COONa}$ 4) 

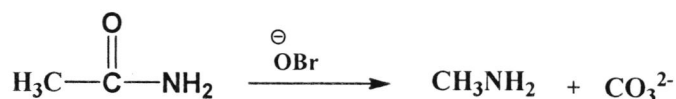
Q5\

(25 marks)

A) Draw the structures formula of the following compounds?

1) Acetanilide 2) Acetaldehyde 3) phthalic anhydride 4) 9,10-anthraquinone

B) Write the mechanism of the following reaction



Good luck