



CRAWFORD UNIVERSITY
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF PHYSICAL AND EARTH SCIENCES
(INDUSTRIAL CHEMISTRY UNIT)
RAIN SEMESTER EXAMINATION 2016/2017 SESSION

COURSE CODE: ICH 345

COURSE TITLE: EXPERIMENTAL ORGANIC CHEMISTRY

UNITS: 1

TIME ALLOWED: 1 HOUR

DATE: MARCH, 2017

INSTRUCTION: ATTEMPT ALL THE QUESTIONS

1. Describe how the solubility of benzoic acid in water at different temperature can be determined in the laboratory. Hence, state the precautions to be taken during the experiment.
2. (a) Describe how you can separate and identify amino acids in a mixture of solutes using paper chromatography. Hence, state the precautions to be taken during the experiment. Support your answer with a diagram showing solvent front.
(b) State four (4) factors on which the partition ratio depends in Gas Chromatography (GC).
3. Copy and complete the tables below:

(a) Solubility of organic compounds

Experiments	Solubility of compound	Possible identification
i	Dissolves in water	
ii	Dissolves in dilute acid but may not dissolve in water	
iii	Dissolves in aqueous alkali but may not dissolve in water	

(b) Chemical tests

Test	Observation	Inference
Solution of organic compound boils with Fehling's solution	Blue solution gives red precipitate.	
Organic compound shakes with bromine solution	Yellow solution decolourizes. If there is also formation of precipitate.	