



CRAWFORD UNIVERSITY
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF EARTH AND PHYSICAL SCIENCE
INDUSTRIAL CHEMISTRY UNIT
RAIN SEMESTER EXAMINATION 2012/2013 SESSION

COURSE CODE: ICH424

COURSE TITLE: INDUSTRIAL METHODOLOGY

TIME ALLOWED: 2 HOURS

3 UNITS

DATE: JUNE, 2013

INSTRUCTIONS: Attempt any Three (3) questions only.

1. (a) What do you understand by the term
 - (i) Work Measurement
 - (ii) Job Evaluation(b) State the reason why 'work measurement' and 'job evaluation' are very important in modern industrial set-up.
2. What are 'therbligs' and 'Hawthorn effects'.
3. (a) Define 'ergonomics'.
(b) Using the computer as a case study, discuss how ergonomics has affected the design of five (5) of its hardware components and peripherals as we use them today.
4. Discuss critically five aspects of ergonomics.
5. Find the maximum value of the function
$$3X + 10Y$$
subject to the following conditions:
$$X \geq 0$$
$$Y \geq 0$$
$$Y \geq -(8/3) X + 8$$
$$Y \leq -(6/7) X + 6$$
$$Y \leq X - 2$$