



**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:** ICH 446

**COURSE TITLE:** POLYMER CHEMISTRY

**TIME ALLOWED:** 2 HOURS

**DATE:** JUNE, 2013

**INSTRUCTIONS:** Attempt any Three (3) questions only.

2 UNITS

1. (a) What are polymers?  
(b) Discuss with examples, the classes of polymers.
2. How are polymers synthesized from monomers?
3. Discuss the various parameters that determine the properties of polymers.
4. Write short notes on the following:
  - i Co-polymers
  - ii Glass Transition Temperature ( $T_g$ ) and Mechanical properties.
  - ii Application of polymers.
5. (i) Briefly list the manufacturing processes available for polymers.  
(ii) Describe in detail, one of the manufacturing processes.