

## CHE2370 – Course Work 2007

Write brief notes on ONE of the following topics:

- (1) The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> laws of thermodynamics
- (2) Enthalpy, entropy and Free energy (including the variation of these properties with temperature and pressure)
- (3) Measurement of enthalpy & rates of reactions
- (4) The chemical potential of a component in a mixture
- (5) Liquid Mixtures
- (6) The steady state & rate-determining steps approximations in Chemical Kinetics
- (7) The kinetics of **ONE** of the following reactions / mechanisms:
  - a. The Michaelis-Menten mechanism
  - b. The Lindemann-Hinshelwood Mechanism
  - c. Chain Reactions as exemplified through the The Rice-Herzfeld mechanism for the pyrolysis of ethanal in the absence of air **OR** the formation of HBr from hydrogen and bromine
  - d. The explosive reaction between hydrogen and oxygen
  - e. The Lotka-Volterra mechanism

**Deadline: One the day of the exam, 12 noon.**