

**CORK INSTITUTE OF TECHNOLOGY**  
**INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ**

**Semester 1 Examinations 2010/2011**

**Module Title:     Pharmacology**

**Module Code:**                CHEM8005

**School:**                        Science

**Programme Title:**        BSc (Hons) Herbal Science  
                                      BSc (Hons) Biomedical Sciences

**Programme Code:**        CR\_SHERB\_8\_Y3  
                                      CR\_SBISC\_8\_Y3

**External Examiner(s):**    **Professor Elizabeth Williamson & Dr. J. Green**  
**Internal Examiner(s):**    **Professor Bill Glimore**  
                                      **Dr Hugh McGlynn**

**Instructions:**                **Answer QUESTION 1 and TWO others**

**Duration:**                    2 hours

**Sitting:**                        Winter 2010

**Requirements for this examination:**

**Note to Candidates:** Please check the Programme Title and the Module Title to ensure that you have received the correct examination paper.  
If in doubt please contact an Invigilator.

- Q1. Describe in detail and discuss the clinical relevance the following:
- (a) Time Zero Concentration of a drug.
  - (b) The half life of a drug
  - (c) The elimination rate constant of a drug
  - (d) The volume of distribution of a drug
- Q2. Discuss the potential for pharmacological manipulation at the Synapse.
- Q3. Describe in detail the differences in the pharmacology of Cholinergic Neurotransmission and Adrenergic Neurotransmission
- Q4. Discuss the clinical significance of altering the activity of the drug metabolising enzymes.
- Q5. Discuss the Therapeutic Index and its significance in drug design and development.
- Q5. 'Chemotherapy is an exercise in selective poisoning'. Discuss.