

CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

Autumn Examinations 2010/11

Module Title: Pharmacology

Module Code: CHEM8005

School: Biological Sciences

Programme Title: Bachelor of Science (Honours) Herbal Science – Year 3

Programme Code: SHERB_8_Y3

External Examiner(s): Dr Julia Green, Prof Elizabeth Williamson

Internal Examiner(s): Dr Hugh McGlynn

Instructions: Answer QUESTION 1 and TWO others

Duration: 2 Hours

Sitting: Autumn 2011

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 use and importance of mathematical modelling to elucidate the pharmacokinetics of an untested drug, in particular the use of single compartment models.
- Q3. Describe in detail the pharmacology of adrenergic neurotransmission
- Q4. Describe in detail the drug metabolising enzymes.
- Q5. Discuss the factors that can alter the concentration of a drug at the synapse; include examples in your answer.
- Q6. Discuss in detail the second messenger system in signal transduction.