

OLLSCOIL NA hEIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SUMMER EXAMINATIONS 2000

M. Sc. Biotechnology

First Year

Third Paper

EXTERN EXAMINER Professor C M Brown
INTERN EXAMINER Internal Examiners

TIME ALLOWED: **3 hours**

ANSWER **FOUR** QUESTIONS IN TOTAL, WHICH MUST INCLUDE **TWO**
QUESTIONS FROM **BOTH** SECTION A **AND** SECTION B.

PLEASE USE **SEPARATE** ANSWER BOOKS FOR EACH SECTION.

SECTION A

1. Design a micro-titre plate-based immunoassay for the anabolic steroid, Nandrolone, stating what reagents you would use and why.
2. List three kinds of labels widely used in immunoassays and discuss the special advantages of each.
3. Compare and contrast polyclonal, monoclonal and recombinant antibodies with regard to their suitability for:
(i) diagnostic, and (ii) therapeutic applications.

SECTION B

1. Give an account of the methods that are employed in the search for new drugs.
2. Show how the log dose:response (LDR) graph can be derived to describe the relationship between dose and response and how LDR graphs can be used to determine the nature of an antagonist drug.
3. Write an essay on the use of animal behaviour methodology in the study of the pharmacology of D-amphetamine.