

Ollscoil na hÉireann, Gaillimh  
National University of Ireland, Galway

GX 2547

Semester II Examinations, 2003/2004

Front Page Template

Exam Code(s) 4BS2, 4BS6

Exam(s) 4<sup>th</sup> Science (including intercalated Medical student)

Module Code(s) SI405 (SI401 P4 for intercalated Medical student)

Module(s) Physiology

Paper No. IV

Repeat Paper Special Paper

External Examiner(s) Dr. D. Marples

Internal Examiner(s) Prof. M. Kane

Dr. K. Doyle

Dr. L. Quinlan

Instructions:

Answer FOUR Questions out of SIX.  
Students MUST attempt at least one question from each section.  
Use a Separate Answer Book for each section.

Duration Three hours

No. of Answer books Three

Requirements:

Handout

MCQ

Statistical Tables

Graph Paper

Log Graph Paper

Other Material

No. of Pages 2

Department(s) Physiology

OLLSCOIL NA hÉIREANN, GAILLIMH  
NATIONAL UNIVERSITY OF IRELAND, GALWAY

Semester II, Summer 2004

B.Sc. (Hons.)

PHYSIOLOGY

**Paper IV**

**Examiners**

Dr D. Marples, Professor M. Kane, Prof. Dr. K. Doyle, Dr. L. Quinlan

Answer **FOUR** Questions out of **SIX**. Students **MUST** attempt at least one question from each section. Use a Separate Answer Book for each section.

**Time Allowed** 3 hours

**Section A: Molecular Biology**

- A1** Give an overview of the processes involved in the synthesis of a protein within a cell. Discuss the advantages of studying the proteome in comparison to the genome.
- A2** Discuss the pathways involved and role of apoptosis in cell physiology.

**Section B: Second Messengers and Pharmacology**

- B1** Write an essay on the consequences of acute and chronic stress on the hypothalamic-pituitary-adrenal axis.
- B2** Discuss the inositol signal transduction pathway and its role in cellular function.

**Section C: Electrophysiology**

- C1** Describe the principle and practice of patch clamp recording.
- C2** Discuss the physiology of two channel types based on your class research assignment.