

**Semester II Examinations, 2003/2004**  
**Front Page Template**

Exam Code(s) 2 MB2

Exam(s) 2<sup>nd</sup> Medical

Module Code(s) SI202

Module(s) Physiology

Paper No. \_\_\_\_\_

Repeat Paper Special Paper

External Examiner(s) Dr. D. Marples

Internal Examiner(s) Prof. M. Kane, Dr. K. Doyle  
Dr. A. Henry, Dr. A. Hynes  
Dr. L. Quinlan

**Instructions:**

Candidates must answer **5** questions out of 6

Duration Three hours

No. of Answer books 1

**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  
2<sup>nd</sup> Medical Examination  
Summer 2004

**SI202 Physiology**

Examiners: Dr. D. Marples, Prof. M. Kane, Dr. K. Doyle, Dr. A. Henry,  
Dr. A. Hynes and Dr. L. Quinlan

**Time Allowed:** Three Hours.

Candidates must answer **5** questions out of 6.

- Q.1** Describe the generation of a nerve action potential and how it travels along a myelinated neuron.
- Q.2** Write an essay on the pulmonary circulation relating pressures, volumes, and capillary blood flow to gravity, and also discussing the effect of left heart failure on pulmonary blood flow.
- Q.3.** Explain concisely how changes in blood volume can affect blood pressure. What would you expect would be the effects of (i) dehydration, (ii) excessive secretion of aldosterone and (iii) treatment with diuretics on blood pressure?
- Q.4** Explain how the spread of electrical activity throughout the heart gives rise to the 5 waves of the ECG. Draw and label a diagram for a human ECG which illustrates the situation of premature (extra) systole and compensatory pause.
- Q.5** Write an essay on the hormones released by the adrenal cortex.
- Q.6** Discuss the role played by the stomach in the digestion and absorption of food.