

Semester I Examinations, 2003/2004

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|----------------------|---|
| Exam Code(s) | 2BS1 2BO1 |
| | 2 nd Science 2 nd Biomedical Science |
| Module Code(s) | SI216 |
| Module(s) | Physiology |
| Paper No. | |
| Repeat Paper | |
| External Examiner(s) | Dr. D. Marples |
| Internal Examiner(s) | Prof. M.T. Kane, Dr. A. Hynes, Dr. L. Quinlan |

Instructions: Candidates must answer 5 questions out of 6

Duration Two hours

No. of Answer books

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
2nd Science and 2nd Biomedical Science Examination
Winter 2003

SI216 Physiology I

Examiners: Dr. D. Marples, Prof. M.T. Kane, Dr. A. Hynes, Dr. L. Quinlan

Time Allowed: Two Hours.

Candidates must answer **5** questions. Each Question is worth equal marks.

- Q.1** Describe 5 major properties of a nerve action potential and outline how an action potential moves along a myelinated neuron.
- Q.2** With the aid of a diagram describe the structure and function of the neuromuscular junction.
- Q.3** Describe for smooth muscle how an action potential triggers contraction by actin and myosin filaments. At what two points in the process is calcium essential for contraction?
- Q.4** Write an essay on the role of white blood cells in immunity.
- Q.5** Draw a Wiggers diagram for the left side of the heart.
- Q.6** Write short notes on two of the following
 - (a) how just two dynamic factors directly affect blood pressure
 - (b) the control of blood flow to the coronary muscle (the muscle of the heart)
 - (c) three factors that affect venous return to the heart