

OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

Third Medical Examination
Winter Examination 1999

NEUROSCIENCE I

Time Allowed: 2 Hours

Please use a Separate Answer Book for Each Section

SECTION A: NEUROPHYSIOLOGY (Examiners: Professor M. T. Kane, Dr. D. Colbert, Dr. L. Quinlan)

Question A1 is compulsory. All other questions in Section A are short note questions to which answers should be from one half to one page in length. Additional material will NOT be corrected.

Answer THREE questions out of FOUR:

A1 Draw the inner ear, label the parts and briefly indicate function where this seems appropriate to you

OR

Give an account of the function of the retina

A2 Write short notes on two of the following

- (a) Adaptation and sensory receptor signalling
- (b) Functions of the spinocerebellar tract
- (c) The stretch reflex and the inverse stretch reflex

A3 Write short notes on two of the following

- (a) resting membrane potential
- (b) glutamate as a neurotransmitter
- (c) the use of co-transmission in the autonomic nervous system

A4: Write brief notes on two of the following:

- (a) intention versus action tremor
- (b) control of walking
- (c) the vestibulo-oculomotor reflex

SECTION B: ENDOCRINOLOGY (Examiner: Dr. Hynes)

Answer TWO questions out of THREE:

A5 Write an essay on the functions of Cortisol

A6 Describe the endocrine function of the posterior pituitary

A7 Write short notes on three of the following

- (a) Aldosterone
- (b) Changes in maternal physiology during pregnancy
- (c) The effects of iodine deficiency on the thyroid
- (d) Growth hormone