

Ollscoil na hÉireann, Gaillimh
Semester 1 Examinations, 2003/2004

Exam Code(s)	1NG1 and 1NG2
Exam(s)	First Bachelor of Nursing Science (General) First Bachelor of Nursing Science (Psychiatric)
Module Code(s)	NU122
Module(s)	Introduction to the Biological Sciences
Paper No.	
Repeat Paper	Special Paper
External Examiner(s)	Dr. Shelagh Sparrow
Internal Examiner(s)	Dr. Karen Doyle Dr. Madhavi Salgaonkar Dr. Michael Power

Instructions:

You are expected to attempt **all** sections.
 You are expected to answer **three** questions from each section.
 Use a separate answer book for each section.
 All questions carry equal marks..

Duration	3 hours
No. of Answer books	3

Requirements:

Handout	
MCQ	
Statistical Tables	
Graph Paper	4
Log Graph Paper	
Other Material	

No. of Pages	3
Department(s)	Centre for Nursing Studies

SECTION A ANATOMY

Please answer **three** questions from this section. Allow 20 minutes for each answer. All questions carry an equal mark.

1. Write a short essay on the different types of connective tissues.
2. Write an essay on the structure of a neuron.
3. Describe in brief the anatomical structure of the hand, including the bones, muscles and nerves.
4. Write a short essay on the vertebral column.
5. Define **THREE** of the following terms with at least two examples where applicable:
 - a) Anatomical position
 - b) Flexion
 - c) Synovial joint
 - d) Proximal
 - e) Foramen

SECTION B PHYSIOLOGY

Please answer **three** questions from this section. Allow 20 minutes for each answer. All questions carry an equal mark.

6. Discuss the role of haemoglobin in the blood.
7. Discuss the properties of action potentials.
8. Discuss the neuromuscular junction.
9. Outline the divisions of the nervous system. Describe the main roles of the divisions of the autonomic nervous system.

/Continued Overleaf

10. Answer part a or b.

a) Outline the role of antidiuretic hormone (ADH) in osmoregulation of the body.

or

b) Outline the role of hormones in the regulation of glucose levels in the body.

SECTION C BIOCHEMISTRY

Please answer **three** questions from this section. Use a diagram to explain your answer if appropriate. Allow 20 minutes for each answer. All questions carry an equal mark.

11. A Define what is meant by the primary structure of a protein.
B How does the primary structure affect the function of a protein.

12. A Which biochemical monomer is most widely used as an energy source.
B What is the main use to which fat is put in the human body.

13. A Outline the flow of information in a cell from DNA to protein
B Where in the cell is most of the energy obtained from catabolic reactions

14. A Lipids are currently the prime poor relation of Biomolecules. Why ?
B Discuss how lipids are mainly metabolised in cellular metabolism

15. A Explain what is meant by ENDERGONIC reactions
B Explain what is meant by EXERGONIC reactions

END