



FACULTY OF SCIENCE

DEPARTMENT OF ZOOLOGY

MODULE PHS2A01

CAMPUS APK

EXAM JUNE 2014

DATE: 20/06/2014

SESSION 08:30

ASSESSOR(S)

PROF GM WAGENAAR

INTERNAL MODERATOR/S

DR P TESKE

EXTERNAL MODERATOR

DURATION 2 HOURS

MARKS 100

NUMBER OF PAGES: 3 PAGES

**INSTRUCTIONS: Answer all the questions
 Use different exam scripts for sections A and B**

QUESTION 1

- 1.1 Compare positive and negative feedback mechanisms in vertebrates. (6)
- 1.2 Explain why positive feedback helps in blood clotting, but is unsuitable for the regulation of body temperature. (9)
- 1.3 Describe the structure of lipids and name the lipids that occur in the plasma membrane of cells. (5)
- [20]

QUESTION 2

- 2.1 Describe the mechanism of carrier-mediated transport used by cells to facilitate the absorption and removal of substances in the cell. Use suitable examples to illustrate your answer. (8)
- 2.2 Explain the origin and the significance of the transmembrane potential. (6)
- 2.3 Describe receptor-mediated endocytosis in the plasma membrane of cells. (6)
- [20]

QUESTION 3

- 3.1 Describe how the skin will respond to injury and repair itself. (8)
- 3.2 Describe the effect of aging on the skin. (7)
- [15]
- Subtotal: 55**

SECTION B – ANSWER THIS SECTION IN ANOTHER EXAM SCRIPT

QUESTION 4

Explain the role of calcium in the skeletal system. In your answer you should refer to the hormones that function to maintain the calcium balance and to the factors that could alter the concentration of calcium in the body fluids. [15]

Question 5

- 5.1 Describe the structural components of a sarcomere. (5)
- 5.2 Explain why skeletal muscle fibres appear striated when viewed through a light microscope. (4)
- 5.3 Describe the structure and function of the neuromuscular junction. (8)
- 5.4 Discuss the muscular contraction cycle (13)

[30]

Subtotal: 45

TOTAL MARKS (100)
