



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN SPORTS SCIENCE

SSS 203: EXERCISE BIOCHEMISTRY II

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DATE: THURSDAY 29TH MARCH 2012

TIME: 11.00 A.M. – 1.00 P.M.

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INSTRUCTIONS

1. Answer question ONE (Compulsory) and any other TWO questions

Question One

- a) Define the following terms
- i) Enzyme (2 marks)
 - ii) Hormone (2 marks)
 - iii) Neurotransmitter (2 marks)
 - iv) Gene (2 marks)
- b) Explain the benefits of doing aerobic exercise (8 marks)
- c) Explain the metabolic effect of epinephrine in the muscle, liver and adipose tissue. (14 marks)

Question Two

- a) Explain the process of gluconeogenesis (10 marks)
- b) Describe the second messenger hypothesis in the hormone mode of action. (10 marks)

Question Three

- a) Describe the mechanism of muscle contraction. (10 marks)
- b) Compare and contrast the aerobic and anaerobic respiration. (10 marks)

Question Four

- a) Using appropriate illustration describe the process of impulse propagation from sensory neuron to muscular tissue. (20 marks)

Question five

- a) Account for the 38 ATPs produced by aerobic respiration. (10 marks)
- b) Explain the voltage gated ion channels. (10 marks)