



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2012/2013

INSTITUTE OF OPEN, DISTANCE AND E-LEARNING

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE

HLR 500: PHYSIOLOGY OF EXERCISE

DATE: Saturday 13th July, 2013

TIME: 2.00 p.m. – 5.00 p.m.

INSTRUCTIONS:

Answer Question One and any other TWO questions. Answer each question in a separate booklet.

1. (a) Distinguish between the three types of muscles. [12 marks]
 (b) Using an illustration, describe the contraction process of a skeletal muscle during exercise. [10 marks]
 (c) Explain the importance of the phosphagen system during exercise. [8 marks]
2. (a) Analyze energy requirements for the following exercise conditions:
 (i) Moderate exercise [5 marks]
 (ii) Maximal exhaustive exercise [5 marks]
 (b) Relate muscle fatigue to exercise. [10 marks]
3. (a) Describe the following producers of hydrogen ions during exercise
 (i) CO₂ [8 marks]
 (ii) Lactic acid [5 marks]
 (b) Explain the importance of acid-base balance during exercise. [7 marks]
4. (a) Describe the effects of altitude on the following types of exercises
 (i) Long term aerobic exercises [6 marks]
 (ii) Short-term anaerobic exercises [4 marks]
 (b) State Henry's law and expound on its clinical application. [10 marks]