

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC2206

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE SUPPLEMENTARY EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

THEORY: SSC2206: EXERCISE PHYSIOLOGY AND BIOCHEMISTRY

AUGUST 2012

3 HOURS (100 MARKS)

INSTRUCTIONS

Answer 4 questions only. Each question carries 25 marks. Where a question contains subdivisions, the mark value for each subdivision is given in brackets. Illustrate your answer where appropriate with large clearly labeled diagrams.

1. The changes that occur in the blood during exercise demonstrate that the blood is carrying out its necessary tasks. Discuss. (25 marks)
2. a) Describe strength gains from resistance training. (13 marks)
b) Describe neural control of strength gains. (15 marks)
3. a) Explain anaerobic threshold (10 marks)
b) Discuss respiratory limitations to exercise (15 marks)
4. Altitude presents a hypobaric environment which has notable physiological impact on the human body. Describe :
a) Physiological responses to exercise. (10 marks)
b) Performance at altitude (15 marks)
5. When applied to training, the principle of specificity refers to adaptations in the metabolic and physiologic systems. Discuss. (25 marks)
6. Briefly describe the following:
a) Resting metabolic rate. (5 marks)
b) Maximal capacity for exercise. (5 marks)
d) Cardiovascular drift. (5 marks)
e) Astrand –Rhyming Bicycle Ergometer Submaximal Test Protocol. (10 marks)

END OF EXAMINATION