

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC1207

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

THEORY: SSC1207: TESTING AND MEASUREMENT

JUNE 2004

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. Write short notes on the following basing your examples on testing and measurement in sport.
 - (i) Nominal Scale [5 marks]
 - (ii) Ordinal Scale [5 marks]
 - (iii) Interval Scale [5 marks]
 - (iv) Ratio Scale [5 marks]
 - (v) Continuous Variables [5 marks]

2. (a) Using an example from sports define criterion related evidence of validity. [5 marks]
- (b) Outline the procedure followed in assessing concurrent validity. [9 marks]
- (c) Give examples of the nature of tests which require construct related evidence of validity. [3 marks]
- (d) Briefly explain the three processes involved in construct validation. [8 marks]

3. (a) Give a brief explanation of ways in which data from maximal oxygen intake test can be used. [7 marks]
- (b) Describe in detail the procedure you would follow to measure aerobic fitness using a field test. [8 marks]
- (c) (i) Define anaerobic threshold. [2 marks]
- (ii) Explain the procedure you can use to determine the anaerobic threshold of an athlete using a field test. [8 marks]

4. Briefly describe the tests that a coach can use to evaluate the following:

- (i) Explosive strength [5 marks]
- (ii) Trunk strength [5 marks]
- (iii) Arm and shoulder muscular endurance [5 marks]
- (iv) General balance [5 marks]
- (v) Flexibility of the lower back and hamstring muscles [5 marks]

5. (a) Identify and give an exposition of each of the tests in a test battery that you would administer to either soccer, tennis or long distance athletes during a macrocycle. [14 marks]

(b) Show how each of the elements you want tested above is important to the specific demands of the sporting discipline. [11 marks]

6. (a) Identify the most common areas for taking skinfold measurements. [4 marks]

(b) Discuss the assumptions and principles which form the basis of the skinfold method of determining percentage body fat. [12 marks]

(c) How would you minimize measurement error in determining percentage body fat through the skinfold method? [9 marks]

END OF EXAM QUESTION PAPER