

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 IN SPORTS

MAY 2005

3 HOURS (100 MARKS)

INSTRUCTIONS

Answer any four 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. a) Define the concepts testing, measurement and evaluation, and show the relationship among the three of them. [15 marks]
- b) (i) Define reliability. [2 marks]
(ii) Explain a suitable method of determining reliability with a fitness test. [8 marks]
2. a) Discuss factors that affect a testing program. [13 marks]
- b) Give a detailed description of how you can measure aerobic capacity without using methods which involve running or walking. [12 marks]
3. a) Why is it important to carryout measurement and evaluation in Sport and Physical Education? [12 marks]
- b) Identify two sports where ability to change direction quickly is an important attribute of good performance. [1 marks]
- c) With the use of a diagram, give a detailed description of a test you would use to measure an athlete's ability to change direction with speed. [12 marks]
4. Write short notes on the following:
 - (a) Discrete and continuous variables [5 marks]
 - (b) Interval scale [5 marks]
 - (c) Ratio scale [5 marks]
 - (d) Content related evidence of validity [5 marks]
 - (e) Intrinsic and logical validity [5 marks]
5. a) How would you measure the anaerobic capacity of the muscles of the upper arm? [10 marks]
- b) (i) With the aid of diagrams describe the procedure followed in administering the modified sit and reach test. [3 marks]
(ii) Why is this test more reliable than the "usual" sit and reach test? [12 marks]

6. a) Explain the procedure that you would follow in measuring; [8 marks]
(i) Body Mass Index [8 marks]
(ii) Waist-Hip Ratio
- b) What does each of the tests measure? [4 marks]
- c) What are the advantages and disadvantages of the use of each of the two tests? [5 marks]

END OF EXAMINATION QUESTION PAPER