

UNIVERSITY OF SCIENCE AND TECHNOLOGY

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

SSC1104

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

**THEORY: SSC1104: FUNDAMENTALS OF ATHLETICS**

December 2005

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. a) Given that a long distance athlete covers 13 500m in 45 minutes in an aerobic pace test run, calculate his/her.
  - (i) Velocity or aerobic pace. (2 marks)
  - (ii) Slow continuous run pace (3 marks)
  - (iii) Long slow distance run pace (3 marks)
  - (iv) Medium continuous run pace (3 marks)
  - (v) Fast continuous run pace (3 marks)
  - (vi) Extensive interval training pace (3 marks)
- b) How would you increase the training load for a middle distance athlete within an annual training programme for;
  - (i) Continuous runs and Extensive Interval Training? (4 marks)
  - (ii) Intensive Interval Training? (4 marks)
2. a) With the aid of a diagram discuss the use of zones and check marks in the 4 x 100m relay. (8 marks)
- b) Schematically illustrate the alternate exchanges in the 4 x 100m and identify its technical characteristics. (8 marks)
- c) Give a brief overview of the biomechanical aspects of running. (9 marks)
3. a) Discuss the progression you would follow in introducing sprint hurdles to a group of beginners. (18 marks)
- b) Identify four sprint drills, explain how they are done and why they are important to sprinting. (7 marks)
4. How would you use bounding, hopping and hurdle jumps as conditioning exercises for jumpers? Your discussion should include distance, repetitions, sets and load level, for each of the three. (25 marks)

Give an exposition of a sequence of drills that you would use to help a beginning athlete to master the discus throw. (17 marks)

(b) With the use of diagrams show the dimensions of a discus and shot put circle. (8 marks)

Discuss the importance of Track and Field Athletics to society? (25 marks)

**END OF EXAM QUESTION PAPER**