

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC1212

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

THEORY: SSC1212: SPORTS SPECIALITY MODULE (TRACK AND FIELD ATHLETICS

- SPRINTS, RELAYS AND HURDLES)

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) Describe the phase structure of the sprint in the maximum velocity phase of a race. [16 marks]
b) Show how you would calculate potential performance in the;
(i) 100m [3 marks]
(ii) 200m [3 marks]
(iii) 400m [3 marks]
2. a) With the aid of force pattern graphs and figures showing angles at various joints, discuss the starting action in sprints [15 marks]
b) Discuss the differences among the bunch, medium and elongated start positions. [10 marks]
3. a) Identify the three components of speed you would want to develop in a sprinter. Specify the training goals, training contents and the training methods for each. [18 marks]
b) Describe seven exercises you would use to develop a sprinter's mobility from the upper body to the lower body. [7 marks]
4. a) In determining your tactics for the 4 x 100 metres relay give a description of the characteristics of each of the 4 legs and the ideal athlete for each. (20 marks)
b) Describe ideal characteristics of an athlete to run the second leg of the 4 x 400 metres relay. [5 marks]
5. a) Design a six day week training plan for a sprinter, to be used in the preparation period. [16 marks]

b) With the aid of diagrams show how relay athletes will be positioned on the track for each of the following;

- (i) Inside pass [3 marks]
- (ii) Outside pass [3 marks]
- (iii) Mixed pass [3 marks]

6. a) How would you develop Hurdling Specific Explosive Strength (Power)? [13 marks]

b) Give a detailed exposition of exercises to improve the hurdles technique. [12 marks]

END OF EXAMINATION QUESTION PAPER