

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC4112

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

THEORY: SSC4112: SPORTS SPECIALITY MODULE

(MIDDLE AND LONG DISTANCE ATHLETICS)

FEBRUARY 2010

3 HOURS (100 MARKS)

INSTRUCTIONS

Answer **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 cadence of above 90 is ideal for distance runners..."
 - a) Explain what is meant by *cadence* and how you would determine it from your team of 5 athletes. (10 marks)
 - b) How would the measurement of stride length and total distance run complement your cadence test? (6 marks)
 - c) Despite the existence of equal opportunities, fewer females' athletic careers rarely go beyond the age of 35 years. Give four causes and five possible solutions to this problem. (9 marks)
2. Cardiovascular endurance is one of the principal conditioning and result determining physiological qualities in long distance running events and other sports.
 - a) List five physiological benefit of the training of this quality. (5 marks)
 - b) Compare the development of cardiovascular endurance from puberty to early adulthood between male and female athletes. (8 marks)
 - c) Draw a comparative table that presents four differences between the three different types of endurance events. (12 marks)
3. "Zimbabwe's middle and long distance athletes are lost until there is a systematic process to harness and develop them."
Examine the above statement highlighting the existing mechanisms and how they could be improved to nurture talent. (25 marks)

4. You have been tasked by the National Amateur Athletics Board to give a one-day workshop on continuous and discontinuous methods used in the development of middle and long distances.
- Draft the structure of your workshop proceedings and lecture series, which should include the practical sessions. (5 marks)
 - Draw up the content for your continuous methods. (20 marks)
5. With examples, briefly discuss the following terms in the context of athletics;
- Strategy. (10 marks)
 - Tactic (give 5 tactical rules.) (10 marks)
 - Give five ways in which injuries in athletics could be prevented. (5 marks)
6. Justify the relevance of the following physical capacities in middle and long distance athletics;
- Strength (5 marks)
 - Flexibility (5 marks)
 - Mental attributes (5 marks)

A coach applied predictive Kosmin tests for 800m and 1500m and obtained the following results:

	1st min distance	2nd min distance	3rd min distance	4th min distance
Normal	330,5m	320,4m	306,8m	300,7m
Precious	279m	259,9m	252,7m	200,6m
Nosimilo	298,7m	318,6m	301,0m	291,6m
Sandra	317,6m	307,3m	297m	262,9m

- Estimate the results for the athletes in **800m** and explain the fluctuations in distance from the trials. (10 marks)

END OF EXAMINATION