

BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF SCIENCE AND ENGINEERING
DEPARTMENT: SPORTS SCIENCE
MASTER OF SCIENCE DEGREE IN SPORTS SCIENCE
SS 506 SPORTS MEDICINE AND REHABILITATION - 1

DURATION: 3 HOURS

TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES

Section A is **compulsory**.

Answer **three** questions from Section B.

JUN 2023

Section A

Question One:

[40 marks]

Usain Bolt laid on the track after suffering a hamstring injury in the final of men's 4 by 400 relay during world Athletics Championships in London on August 12, 2017. Treatment took the form of first allowing the tear to heal up so as to allow development of scar and scar tissue. Exercise therapy can help increase muscle strength so the scar tissue gets properly replaced with new muscle tissue. Kinesiotherapy was done for the muscles to fully recover so as to avoid injury recurrence. Getting stronger, resting and allowing the body to recover allows for tissue healing and the ability to deal with increased hamstring strain. Biomechanics analysis was done so as to find the root cause of why there was so much strain, Bolt's running asymmetry style was revealed. This helps prevent future injuries.

In your opinion why was Kinesiotherapy used and what other options were available for the treatment of Usain Bolt's injury?

Section B.

Question One

[20 marks]

Explain the concept of kinesiotherapy and how you could use it in injury prevention.

Question Two:

[20 marks]

How can an athlete who has sustained a lower limb injury benefit from hydro-kinesiotherapy and kinesiotherapy in the gym? Give examples.

Question Three:

[20 marks]

Many books and articles suggest that the history should be taken in a set order (Douglas et al 2005, Shah 2005), however, it is not necessary to adhere to these rigidly. Explain the history-taking process, order and structure

Question Four:

[20 marks]

Difference between therapeutic massage and clinical massage, stating how they can be complementary to each other.

Question Five:

[20 marks]

Discuss the benefits of increased capillarisation and increased venous return to performance in physical activity.

Question Six:

[20 marks]

Discuss the cryotherapy treatment phases.

Question Seven

Explain the use of hydrotherapy treatments and their effect.

END OF PAPER