

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT: SPORTS SCIENCE

15 OCT 2023

BACHELOR OF SCIENCE HONOURS DEGREE IN SPORT SCIENCE AND MANAGEMENT

SSM 412: PHYSIOLOGY OF EXERCISE

DURATION: 3 HOURS

TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES

Answer **two** questions from Section A and **two** questions from Section B.

Section A

1. (a). What is the difference between anaerobic and aerobic energy systems. (10 marks)
(b). Discuss the differences in functions of fats and proteins in fueling exercise? (10 marks)
2. (a). Sketch a graph to show how the predominant energy system depends on duration of exercise as an important factor to an Exercise Physiologist? (10 marks)
(b). How does blood doping enhance VO_2 Max giving its associated risks to an athlete? (10 marks)
3. (a). Differentiate between altitude training and acclimatization? (10 marks)
(b). Illustrate the best ways athletes can get altitude exposure? (10 marks)

Section B.

4. With reference to the physiological adaptations that occur in the cardiovascular and respiratory systems, analyse why a trained performer can work at a higher intensity before reaching their VO_2 Max? (30 marks)
5. Develop a presentation for a group of sports medics in training on the signs, symptoms and treatment options for any 5 heat illnesses or conditions athletes may suffer during competitions? (30 marks)

6. Formulate a business proposal of activities to offer fitness and rehabilitation services to different individuals including athletes in a diverse community using your mastery of exercise physiology?
(30 marks)

END OF PAPER