BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT: SPORTS SCIENCE

PROGRAMME: BACHELOR OF SCIENCE HONOURS DEGREE IN SPORTS SCIENCE AND MANAGEMENT

COURSE CODE: SSM212 (2): NARRATION: NUTRITION AND METABOLISM IN SPORTS

DURATION: 3 HOURS TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES

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

Section A

1.Explain the role of carbohydrates in athletic performance. (20 Marks).

2. Explain how the timing of meals and snacks can influence energy levels, muscle recovery, and overall performance. (20 Marks).

3. Discus the ethical and health concerns surrounding the use of performance-enhancing substances, such as diuretics and laxatives, for weight management in sports. (20 Marks).

Section B.

4. A soccer player is struggling with muscle cramps and fatigue during games.

Task:

Discuss the potential factors contributing to muscle cramps and fatigue, focusing on the athlete's nutritional and hydration status. Make recommendations on dietary and fluid intake that will help the player to minimize muscle cramps and optimize performance. (30 Marks).

5. A marathon runner is preparing for a race. They need to ensure adequate energy stores for the long duration of the event.

Task:

Design a pre-race meal plan for the runner, focusing on the appropriate macronutrient ratios and timing of food intake. Justify your choices based on the metabolic processes involved during prolonged endurance exercise. (30 Marks)

6. A sprinter needs to maximize their power output for a short, intense burst of activity.

Task:

Explain the primary energy systems used by the sprinter during their race. Describe the role of creatine phosphate and glycogen in this energy production. (30 Marks)

END OF PAPER