

BINDURA UNIVERSITY OF SCIENCE EDUCATION  
FACULTY OF SCIENCE AND ENGINEERING  
DEPARTMENT: SPORTS SCIENCE  
MASTER OF SCIENCE DEGREE IN SPORTS SCIENCE  
SS505 NUTRITION FOR EXERCISE AND HEALTH

DURATION: 3 HOURS

TOTAL MARKS: 100

(Plus 15 Minutes for Practical Preparation/Case Reading)

INSTRUCTIONS TO CANDIDATES

JUN 2025

Section A is **compulsory**.

Answer **three** questions from Section B.

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**Section A**

Themba is a 17-year-old high school junior who has a chance of starting as a linebacker at the football team. He is 1.83m tall and weighs 79.4 kgs. His coach has recommended that he gain 4.5 - 6.8 kgs over the next 8 months, but not at the sacrifice of his speed and quickness. Themba eats home-cooked, well-balanced meals for breakfast and supper. At breakfast he also drinks a mega-protein supplement that contains 56 grams of protein. For school, he packs his own lunches, which usually include tuna or chicken sandwiches with potato chips and milk. He also has a mid-morning and mid-afternoon snack, which typically consists of a protein bar (24grams of protein/bar) he works out in the high school weight room two to three times per week in the late afternoon. When he arrives home, he studies until the family eats supper around 7p.m. his final snack of the day occurs just before bedtime when he consumes another mega-protein supplement that contains 56 grams of protein.

As a nutrition coach;

**TASK**

1. i) Comment on the dietary protein that Themba gets towards his goal achievement.
- ii) What are the recommended guidelines for protein intake for an athlete like Themba who wants to gain weight?
- iii) Why is emphasis given to protein sources when someone wants to gain weight?
- iv) What is the effect of consuming a diet that contains too much protein?

40 marks

**Section B**

2. Tafara a wrestler, ready for competition has been told to lose weight to qualify his selected category.  
20 marks

**Task**

What weight loss program would you suggest for Tafara? Explain the importance of including exercise in weight loss and maintenance program.

3. Tamuka is a marathon runner who is getting ready for a competition. 20 marks

**Task**

As a Sports dietician, design a balanced diet you would recommend to Tamuka. Describe the foods that should be consumed by Tamuka in greater amounts.

4. Your collegiate basketball players are set to compete in a round robin competition. These players need a protein rich diet after competition. 20 marks

**Task**

Design a diet plan you would recommend i) Before the competition ii) After the competition

5. Paida a 15-year-old gymnast complains of soreness, fatigue and heavy legs for several days after a hard practice. 20 marks

**Task**

What could be the possible cause of these symptoms for Paida? Suggest recommendations for Paida to overcome the experienced symptoms.

6. Zenzo an adventure racer's primary concern include preventing dehydration and ensuring adequate sodium replacement to eliminate possibility of hyponatremia (overhydration). 20 marks

**Task**

How best can Zenzo prevent hydration? Suggest a drinking plan for Zenzo and suggest how he will eliminate overhydration.

**END OF PAPER**