

# NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY



**SSC4104**

FACULTY OF APPLIED SCIENCES

DEPARTMENT OF SPORTS SCIENCE AND COACHING

**CONVENTIONAL/BLOCK RELEASE PROGRAMMES**

SSC4104: NUTRITION AND SPORT NUTRITION

**EXAMINATION QUESTION PAPER**

**DECEMBER 2024**

This examination question paper consists of 3 pages

TIME ALLOWED: 3 HOURS  
TOTAL MARKS: 100  
SPECIAL REQUIREMENTS: NIL  
EXAMINER'S NAME: MRS S H RUTSATE

## INSTRUCTIONS

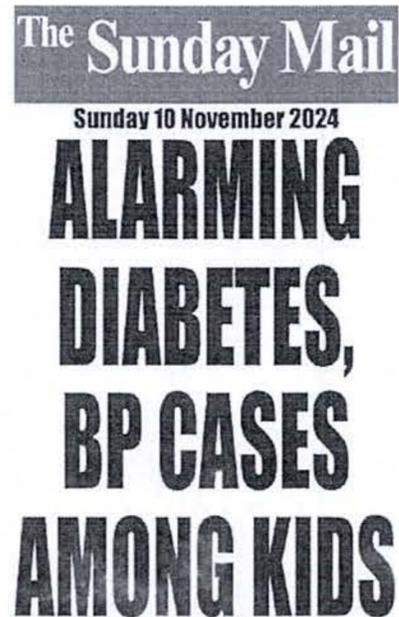
- 1) Answer any 4 questions.
- 2) Each question carries 25 marks.
- 3) Where a question contains subdivisions, the mark value for each subdivision is given in brackets.

## MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25
<b>TOTAL</b>	<b>100</b>

### Question One

- a) Discuss the implications of Protein Structural arrangements on their functional Roles to the Sport Person. [15 Marks]
- b) Read the advert below and suggest the causes that may be leading to such a headline and the various interventions you as a Sport Nutritionist could apply. [10 Marks]



### Question Two

- a) Justify the ingestion of carbohydrates and proteins or amino acids during resistance exercise [10 Marks]
- b) Compare any five (5) essential and non-essential amino acids properties. [15 Marks]

### Question Three

Read the narrative below and then answer the questions that follow.

Team Zimbabwe Region 5 athletes are scheduled to start games at 6:00 am with 20km, 10km, 5000m races for both male and females. The coaches instruct the athletes to sleep until 0530am, since they were back late last night with long briefings. As they wake up they take a very fast shower, taken to the kitchen and given each an egg, 4 slices of bread with margarine, peanut butter and jam, beans and Inyanga Refreshing tea, juice and water. A banana is also given to these athletes as a wash down. All races and games played until 10:00 am are a disaster for Team Zimbabwe. You are asked to assist.

- (a) As a consultant Nutritionist write a comprehensive report on your observations on what is happening with these athletes,

[10 Marks]

- (b) Advise and make recommendations to the team management and the coaches so that the following games are scored better? [5 Marks]
- c) Explain with reasons nutritional innovations that you can develop for the Zimbabwe Team from locally available foods that this team could have taken and metabolized easily for easy nutrition when they travel for competitions. [10 Marks]

#### Question Four

- a) Explain why there would be need for an acute protein dose for athletes? [15 Marks]
- b) Using a table list five (5) vitamins, the reason that vitamin is needed and their sources (10 Marks)

#### Question Five

- a) Design a nutrition plan suitable for an athlete of your choice. [10 Marks]
- b) Explain with reasons nutritional innovations that you can you develop for sport elite Team from locally available food you identify for when they travel for competitions abroad. [10 Marks]

#### Question Six

In what ways does the classification and storage mechanisms of vitamins impact their bioavailability and physiological roles in promoting health?

[15 Marks]

**END OF EXAMINATION**