



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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UNIVERSITY EXAMINATIONS 2023/2024

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF EDUCATION ARTS

EPH 3251: EXERCISE PHYSIOLOGY AND SPORTS NUTRITION

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

- a) Explain the following concepts as used in Exercise Physiology and Sports Nutrition
- i. Exercise (2 Marks)
 - ii. Training (2 Marks)
 - iii. Conditioning (2 Marks)
 - iv. Metabolism (2 Marks)
 - v. Body Composition (2 Marks)
- b) Discuss the effects of the following on Cardiovascular Endurance
- i. Isotonic Contractions (4 Marks)
 - ii. Isometric Contractions (4 Marks)
- c) Explain the increase in body mass as a result of weight lifting (4 Marks)
- d) Discuss the impact of weight training on sprints and endurance events (4 Marks)
- e) Discuss the impact of exercise on the aging process (4 Marks)



MUST is ISO 9001:2015 and



ISO/IEC 27001:2013 CERTIFIED

QUESTION TWO (20 MARKS)

- a) Discuss the Cardiovascular responses to Exercise (10 Marks)
- b) Discuss how the cardiovascular system adapts itself to Physical Training (10 Marks)

QUESTION THREE (20 MARKS)

- a) Explain the following concepts
 - i. Ergogenic aids (4 Marks)
 - ii. Drug abuse (4 Marks)
 - iii. Substance abuse (4 Marks)
- b) Discuss the impact of alcohol on the performance of an elite athlete in sports (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the impact of high altitude on the performance of track and field Events (10 Marks)
- b) Explain the principles of high altitude training and sports performance (10 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain the role of Acetyl Co Enzyme A in the production of ATP Energy (6 Marks)
- b) Discuss the following blood sugar conditions
 - i. Hypoglycemic shock (4 Marks)
 - ii. Hyperglycemic spike (4 Marks)
- c) How would you prescribe exercises to correct the conditions in b) (i) and (ii) above (6 Marks)

