

LAIKIPIA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN SPORTS SCIENCE
MANAGEMENT**

**SPSM 112: HUMAN ANATOMY AND PHYSIOLOGY IN
SPORTS**

STREAM: R

TIME: 2 HRS

DAY: MONDAY [11.30 A.M-13.30 P.M] DATE: 02/02/2026

THIS QUESTION PAPER CONSISTS OF TWO (2) PAGES

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Vision: Nurture and Transform for the World

Mission: To Contribute to the World through Education, Research, Training, Consultancy, Innovation, Outreach and Collaboration

Instructions: Answer question one (Compulsory) and any other two questions

Question one

- a) Define the following anatomical and physiological terms **(5 marks)**
- i) Physiology
 - ii) Homeostasis
 - iii) Joint
 - iv) Muscle contraction
 - v) Energy system
- b) Explain the structure and major functions of the skeletal system and illustrate how it supports sports performance. **(7 marks)**
- c) Differentiate the three major types of joints and relate each to a sport movement example. **(6 marks)**
- d) Describe the coordination of the neuromuscular system during human movement. **(6 marks)**
- e) Explain the significance of osmo-regulation and excretion systems in maintaining performance during high-intensity exercise. **(6 marks)**

Question Two

- a) *“The skeletal system forms the foundation upon which all movement in sport is built.”*
Discuss this statement by examining how the structure of bones and joints enables complex athletic movement **(15 marks)**
- b) Analyse how skeletal adaptations contribute to enhanced sports performance **(5 marks)**

Question Three

- a) Evaluate the role of muscle physiology in determining athletic performance. In your answer, explain muscle fibre types, contraction mechanisms **(15 marks)**
- b) Explain how training influences muscle function in both endurance and power-based sports **(5 marks)**

Question Four

- a) Discuss the nervous system as the central coordinator of human movement **(15 marks)**
- b) Highlight how neural control, coordination, and proprioceptive feedback influence skill execution and performance efficiency in sport **(5 marks).**