



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS (MATHS/P. E), KISW/P. E), (HIST/P. E), (CRE/P. E) AND (GEOG/P.E)

EPH 3151: HUMAN ANATOMY AND PHYSICAL ACTIVITY

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

- a) Describe an athlete's body in "anatomical Position" (3 Marks)
- b) Distinguish between the following concepts giving at least one physical activity performed along the planes and axes of symmetry.
 - i. Frontal Plane and Frontal axis (3 Marks)
 - ii. Sagittal Plane and Sagittal Axis (3 Marks)
 - iii. Transverse Plane and Longitudinal Axis (3 Marks)
- c) Giving reasons compare and contrast two adapted features of the lower and upper appendicular skeleton (8 Marks)
- d) Describe the principles of muscular movement that allows the flexion and extension of the arm around the elbow joint (8 Marks)
- e) Distinguish between the deformation at the thoracic and lumbar vertebrae (2 Marks)



MUST is ISO 9001:2015 and



ISO/IEC 27001:2013 CERTIFIED

QUESTION TWO (20 MARKS)

- a) Among the parts of the axial skeleton, only the head is found to exhibit a range of movement.
Explain (4 Marks)
- b) Explain the features and structure of the following:
- i. Thoracic cavity (6 Marks)
 - ii. Abdominal Cavity (6 Marks)
- c) Discuss the shape and functions of the diaphragm organ (4 Marks)

QUESTION THREE (20 MARKS)

Explain the following concepts in relation to bone structures;

- i. Articulation (4 Marks)
- ii. Flexibility (4 Marks)
- iii. Stability (4 Marks)
- iv. Dislocation (4 Marks)
- v. Fractures (4 Marks)

QUESTION FOUR (20 MARKS)

- a) Giving examples, distinguish between Aerobic and Anaerobic Activities (8 Marks)
- b) Discuss the role of the lungs and heart during intense physical activities (8 Marks)
- c) Explain the role of warm up before a physical activity (4 Marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the concept sedentary lifestyle (6 Marks)
- b) Describe the anatomical features that you would observe as a result of sedentary lifestyle (8 Marks)
- c) What precautions would you take when rehabilitating individuals after a sedentary lifestyle (6 Marks)

