



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya

Tel: +254(0) 799 529 958, +254(0) 799 529 959, + 254 (0) 712 524 293,

Website: [info@must.ac.ke](mailto:info@must.ac.ke) Email: [info@must.ac.ke](mailto:info@must.ac.ke)

---

## University Examinations 2023/2024

SECOND YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF  
BACHELOR OF ANIMAL HEALTH PRODUCTION

### SHV 3250: ANIMAL METABOLISM AND ENZYMOLOGY

DATE: APRIL 2024

TIME: 2 HOURS

---

INSTRUCTIONS: Answer question *one* and any other *two* questions

---

#### QUESTION ONE (30 MARKS)

- a) Explain the three mechanism involved in monosaccharides absorption (3 marks)
- b) Outline the fate of pyruvate (3 marks)
- c) Outline the significance of glycolysis (5 marks)
- d) Explain the metabolism of vitamin B<sub>5</sub> and vitamin C (4 marks)
- e) Differentiate between homolytic and heterolytic fission (2 marks)
- f) Explain the essential ions cofactors (3 marks)
- g) Write short notes on NAD and NADPH (4 marks)
- h) Discuss the phase 1 detoxification reactions (5 marks)

#### QUESTION TWO (20 MARKS)

- a) Describe the glycolysis pathway (10 marks)
- b) Discuss the major classes of enzymes (10 marks)

**QUESTION THREE (20 MARKS)**

- a) Illustrate the Krebs cycles (10 marks)
- b) Discuss the beta oxidation of fatty acids (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Discuss enzyme inhibitors (10 marks)
- b) Describe the four molecules in electron transport chain (10 marks)