



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 Email: info@must.ac.ke

University Examinations 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DIPLOMA IN ANIMAL
HEALTH PRODUCTION

SHV 2200: BIOCHEMISTRY I

DATE: APRIL 2024

TIME: 1½ HOURS

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

QUESTION ONE (30 MARKS)

- a) Highlight the classification of proteins based on biological functions (4 marks)
- b) Explain the formation of a peptide bond (4 marks)
- c) Enumerate any four properties of water (4 marks)
- d) Draw the structure of the following amino acids
 - i. Valine (2 marks)
 - ii. Tyrosine (2 marks)
- e) Summarize the relevance of biochemistry in the field of agriculture (4 marks)
- f) Highlight the chemical bonds that the biomolecules exhibit (4 marks)
- g) Differentiate between waxes and neutral fats (2 marks)
- h) Summarize the biological importance of cholesterol (4 marks)

QUESTION TWO (15 MARKS)

Explain the sources and deficiencies of any five trace elements

Meru University of Science & Technology is ISO 9001:2015 Certified

Foundation of Innovations

Page 1

QUESTION THREE (15 MARKS)

- a) Discuss the processes that occur in the cell to modify mRNA for it to be ready for translation into amino acid (8 marks)
- b) Enumerate the differences between DNA and RNA (7 marks)

QUESTION FOUR (15 MARKS)

- a) Discuss the roles of proteins in biological processes (10 marks)
- b) Explain the importance of buffers in a biological system (5 marks)