

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2014/2015**

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

**AAF 3122: CELL BIOLOGY, PHYSIOLOGY AND TECHNOLOGY**

**DATE: JULY 2015 TIME: 2 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. List any five cell organelles (5 Marks)
2. Explain why transport across all the cell membrane must occur across all body cells

(5 Marks)

1. Describe resting membrane potential (5 Marks)
2. Define the term transcription in protein synthesis (5 Marks)
3. What is cryogenic storage of cells (5 Marks)
4. Differentiate between mitosis and meiosis (5 Marks)

**QUESTION TWO (20 MARKS)**

1. Describe the krebs cycle and show how it prepares for release of ATPs in the electron transport chain (10 Marks)
2. What are the components of the extracellular matrix (10 Marks)

**QUESTION THREE (20 MARKS)**

1. What are the application of cell culture (8 Marks)
2. Give the classifications of epithelial tissues (12 Marks)

**QUESTION FOUR (20 MARKS)**

1. Explain the application of plant tissue culture in plant sciences, forestry and horticulture (10 Marks)
2. Describe various types of connective tissue in animals body (10 Marks)