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**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# University Examinations 2015/2016

**YEAR I SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN GENOMIC SCIENCE**

# SZL 2112: PRINCIPLES OF TRANSMISSION

**DATE: DEC, 2015**  **TIME: 2 HOURS**

**INSTRUCTIONS: Answer Question ONE (Compulsory) and Any Other TWO Questions.**

**Question One**

a) Describe briefly the three great milestones in genetics. [6 marks]

b) Discuss briefly factors contributing to successful experimentation by Mendel.

[6 marks]

c) Explain briefly the phenomenon of epistals. [6 marks]

d) Distinguish between mitosis and meiosis. [6 marks]

e) State the evidence for the existence of cytoplasmic inheritance. [6 marks]

**Question Two (20 Marks)**

Discuss variations to Mendel inheritance involving single gene.

**Question Three (20 Marks)**

Describe the chromosome theory of inheritance and its validation.

**Question Four (20 Marks)**

Describe linkage and recombination.

**Question Five (20 Marks)**

Discuss the concept of extranuclear genome.