



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
FOURTH YEAR SECOND SEMESTER**

**SCHOOL OF NATURAL RESOURCES TOURISM
AND HOSPITALITY**

**BACHELOR OF SCIENCE IN ANIMAL HEALTH
AND PRODUCTION**

COURSE CODE: AHP 4205 & AHP 2206-1

COURSE TITLE: ANIMAL BIOTECHNOLOGY

DATE: 18/4/2023

TIME: 0830-1030 HRS

INSTRUCTIONS TO CANDIDATES

- (i) Attempt ALL the questions
- (ii) Label your answers clearly
- (iii) Don't mix up answers
- (iv) DO NOT WRITE anything on the question paper

This paper consists of 2 printed pages. Please turn over

Question 1

a) Define the following terms. (2.5 Marks each)

Biotechnology

Fragment

Vector DNA

Plasmid

Clone

Genetically Modified Organism

Genetic Engineering

Recombinant DNA technology

b) Name four important elements of ecosystems. (4 Marks)

c) List five branches of Biotechnology. (5 Marks)

d) Give FIVE negative effects of biotechnology. (5 Marks)

Question 2

Discuss **FIVE** applications of Biotechnology. (20 Marks)

Question 3

a) Give and describe the steps of Cloning. (8 Marks)

b) Mention the applications of Marker Assisted Selection. (12 Marks)

Question 4

Explain the biotechnological methods of disease diagnosis and pathogen monitoring. (20 Marks)

Question 5

Discuss FIVE benefits of genetic engineering in agricultural production. (20 Marks)

Question 6

Using a diagram describe in details the hydrologic cycle in detail. (20 Marks)

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