

APH 822/AAP 811



University of choice

**MASINDE MULIRO UNIVERSITY OF SCIENCE & TECHNOLOGY
(MMUST)**

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE MASTER OF SCIENCE IN ANIMAL PRODUCTION AND
RELATED OPTIONS**

**COURSE TITLE: RESEARCH EXPERIMENTAL DESIGNS AND
STATISTICAL COMPUTING**

COURSE CODE: AAP 811 / APH 822

DATE: 21 .04. 2023

TIME: 2-5PM

INSTRUCTIONS TO CANDIDATES

- i) Answer ALL questions in SECTION A and any TWO questions in SECTION B
- ii) Write clearly and Show logical steps clearly when giving illustrative examples

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Pages. Please Turn Over >

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

QUESTION ONE

In the context of research proposal writing, discuss briefly the construct and content of:

(I) Literature review **(8 Marks)**

(II) Materials and methods **(7 Marks)**

QUESTION TWO

Concisely and precisely discuss each of the terms following terms as used in statistical aspects of research:

Qualitative data,

Statistical

Significance and

Non parametric statistical analysis.

(10 Marks)

QUESTION THREE

Differentiate between the following in the context of research project writing:

(i) Descriptive and inferential statistical analyses **(7 Marks)**

(ii) Conceptual framework and theoretical framework **(8 Marks)**

SECTION B ANSWER ANY TWO QUESTIONS (20 Marks)

QUESTION FOUR

The Chi- Square test and the Spearman rank order correlation analysis are non parametric statistical analyses methods commonly used in animal production research studies. Briefly

discuss the principles and application of:

(i) Spearman rank order correlation

(5 Marks)

(ii) Chi- Square test

(5 Marks)

QUESTION FIVE

Discuss in terms of application, internal, external and social validity of the following research

Designs:

(i) Case Study

(5 Marks)

(iii) Randomized block

(5 Marks)

QUESTION FIVE

A Kenya Soils project in Trans Nzoia County. Kenya has confirmed that an area of 20 acres has

a grass species being used by ruminants as forage, Outline the steps an animal production scientist

at the Kitale, Kenya Agricultural and Livestock Research Organization station will follow to evaluate

the forage suitability that grass as a livestock mineral lick source

(10 Marks)

160
ACR 202



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

**MAIN CAMPUS
UNIVERSITY EXAMINATIONS**

2022/2023 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER EXAMINATIONS

MAIN EXAMINATION

FOR THE AWARD OF DEGREE IN:

SAR/SAM/SAE/EPE/ACED.

COURSE CODE: ACR 202

COURSE TITLE: PRINCIPLES OF HORTICULTURE

DATE: 24.04.2023

TIME: 12 - 2 PM

INSTRUCTIONS

Answer ALL questions in section A and any TWO in section B;

SECTION A ANSWER ALL QUESTIONS (30 MARKS)

1. Explain five factors one would consider when setting up an orchard. (10 marks)
 2. Discuss the advantages of vegetative propagation in fruit production. (10 marks)
 3. Discuss the quincunx or filter system of orchard layout the aid of a diagram. (10 marks)
-

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

4. Discuss the ripening indices in mangoes and banana fruits (20 marks)
5. Discuss the function of the following growth regulators (20 marks)
 - i. Auxins
 - ii. Gibberellins
 - iii. Cytokinins
 - iv. Ethylene
 - v. Abscisic acid.
6. With aid of a diagram explain the T-budding and Inverted T-budding (20 marks)