

120
AGR 303



University of choice

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
SCHOOL OF AGRICULTURE, VETERINARY SCIENCES AND
TECHNOLOGY (SAVET)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR**

**MAIN EXAMS
OF
BACHELOR OF ANIMAL PRODUCTION AND PROCESSING,
AGRICULTURE AND BIOTECHNOLOGY AND FISHERIES AND
AQUACULTURE**

COURSE CODE: AGR 303

COURSE TITLE: RESEARCH METHODS IN AGRICULTURE

DATE: 6.12.23

TIME: 8-11AM

INSTRUCTIONS TO CANDIDATES

This paper is divided into two sections, **A and B**. Answer ALL Questions in SECTION A and any Two in SECTION B

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

Q1. Briefly explain FOUR factors to consider in developing a sampling design. **(8mks)**

Q2. A section questionnaire used to collect data on farmers' preferences for extension training methods is reproduced below. Study it carefully and then answer the questions following. From the listed provide, indicate any FIVE extension training methods you consider effective for farmers.

First [-----] Second [-----] Third [-----] Fourth [-----] Fifth [-----]

Codes for training methods

- | | |
|--------------------------------------|---|
| 1=Field days | 9=Leaflets |
| 2=Farmer field Schools | 11=Farmer champions |
| 3=Agricultural training Centre (ATC) | 12=Championing through churches |
| 4=Training workshops | 13=Through schools to pupils and students |
| 5=One-on-one by extension agents | 14=Radio or TV |
| 6=Farmer-to farmer extension | 15= Agricultural shows |
| 7=On-farm Demonstration | 16=Others (specify)----- |

8=Visits by farmer groups to farmers practicing the technology

a). List the variables defining the data to be collected with this questionnaire and for each variable indicate the type of measurement scales appropriate **(2 marks)**

b). Develop a draft template for entering the data from this questionnaire which can be used in an electronic database, clearly showing all the variables and indicate whether a string or numeric. **(5 marks)**

Q3. Explain the importance of database in research process. **(5marks)**

Q4. List FOUR characteristics of a good research title **(6marks)**

Q5. Distinguish between the following terms as used in research: **(8mks)**

- i) Aim and Specific objectives
- ii) Basic research and applied research
- iii) Problem statement and research questions
- iv) Population and sample

Q6. Explain the terms randomization, replication and roles of replication as used in data collection process during research implementation (6mks)

SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)

Q9. Discuss the various probabilistic sampling techniques that a researcher may use to select a sample from the population giving an advantage and disadvantage for each.

(15mks)

Q10. Compare and contrast research hypotheses and research questions (15mks)

Q11 (a). Explain any FIVE common reasons for conducting research (10 mks)

b) Differentiate between analytical research and applied research? (5 mks)

Q12. Examine the factors that are likely to influence the choice of a research problem

(15mks)

