



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGR 301: RESEARCH METHODS IN AGRICULTURAL EDUCATION AND  
EXTENSION

DATE: 27/9/2019

TIME: 11.00-1.00 PM

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## INSTRUCTIONS:

*ALL* questions from Section A and any other *THREE* from Section B

### SECTION A: COMPULSORY (40 MARKS)

#### QUESTION ONE

- a) Define the term research (1 marks)
- b) Distinguish between the following terms used in research
  - i) Inferential statistics and descriptive statistics (2 marks)
  - ii) Concept and theory (2 marks)
  - iii) Dependent and classification variables (2 marks)
- c) Explain four dimensions useful in classification of research methods (4 marks)
- d) Explain four goals of explanatory research (4 marks)
- e)
  - i) Explain any five disadvantages of focus group discussion over personal interviews (5 marks)
  - ii) Explain five factors that affect internal validity in research (5 marks)
- f) Explain four types of literature reviews that you may choose as a researcher in your field of specialization (4 marks)

**SECTION B: ANSWER ANY THREE QUESTIONS (60 MARKS)**

**QUESTION TWO**

- a) You have been tasked with preparing a review on 'Role of Genetically Modified Organisms (GMOs) in solving food security in Africa'. Describe the steps you would follow in preparation a literature review in the subject area (16 marks)
- b) As a scientist in the field of agricultural education and extension, explain four reasons why you will not rely on secondary data alone in your research (4 marks)

**QUESTION THREE**

- a) As a research scientist in your field of specialization, explain five factors you will considered in choice of best data collection tools (10 marks)
- b) When undertaking research, explain five research ethics you must adhere to when carrying out research in agriculture (10 marks)

**QUESTION FOUR**

- a) Explain six characteristics of good scientific methods in research (12 marks)
- b) Explain four elements you would include in summarizing your proposal (8 marks)

**QUESTION FIVE**

You have been appointed by your employer to head in developing a proposal and its implementation.

- a) Explain five ways of framing good quality objectives (10 Marks)
- b) Explain the areas to include when presenting your report (10marks)