



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (COMMUNITY RESOURCE MANAGEMENT)

BACHELOR OF ENVIRONMENTAL STUDIES (COMMUNITY DEVELOPMENT)

ESU 304: RESEARCH METHODS

DATE: 20/1/2021

TIME: 2.00-4.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

Suppose you were the executive officer of Water and Environment in Machakos county and 100 cases of Cholera are reported in one of the urban settlements in the County.

- a) Describe the type of research you will commission to be carried out to address the issue. (5 marks)
- b) Provide a short title for such kind of study (5 marks)
- c) Formulate a general objective and hypothesis for this study. (5 marks)
- d) Explain the limitations of this type of study. (5 marks)
- e) Briefly describe two methods of data collection for this study. (5 marks)
- f) Explain the ethical considerations that should be taken into account in this study. (5 marks)

QUESTION TWO (20 MARKS)

- a) Describe the reasons for reviewing literature and other information during preparation of a research protocol. (10 marks)
- b) Describe five attributes that you will consider in ensuring that an experiment is well designed. (10 marks)

QUESTION THREE (20 MARKS)

- a) Describe the ways that you could use to increase reliability and validity of data generated in a study. (10 marks)
- b) Discuss the purpose and characteristics of a good quality research. (10 marks)

QUESTION FOUR (20 MARKS)

Discuss the information and key features of the following components of a research proposal.

- a) Abstract (5 marks)
- b) Introduction (5 marks)
- c) Materials and Methods (5 marks)
- d) References (5 marks)

QUESTION FIVE (20 MARKS)

Sampling methods fall into two broad categories, probability and non-probability. Name and describe in detail three probability sampling methods and two non-probability sampling methods that you can use in conducting environmental research.