



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCE MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

BACHELOR OF ENVIRONMENTAL STUDIES AND COMMUNITY DEVELOPMENT

ESU 304: RESEARCH METHODS

DATE: 26/9/2019

TIME: 2:00 – 4:00 PM

INSTRUCTIONS: Answer question ONE and TWO other questions

QUESTION ONE (COMPULSORY) (30 MARKS)

Assume you have been sponsored to undertake research on the effects of discharge of effluent waste from a tannery into river Athi on human and environmental health

- a) How can you determine whether this research problem/topic is an important one? (6 marks)
- b) Explain the importance of literature review on this study (6 marks)
- c) What factors will you consider to arrive at a truly representative sample size? (6 marks)
- d) How would you ensure that the subjects will participate fully in this study? (6 marks)
- e) Explain briefly how you will sample the respondents. (6 marks)

QUESTION TWO (20 MARKS)

Differentiate between the following.

- i) Sample population and Sampling frame (4 marks)
- ii) Descriptive and Correlation research (4 marks)
- iii) Stratified sampling and Cluster sampling (4 marks)
- iv) Causal-comparative and Experimental research (4 marks)
- v) Probability and Non-probability sampling methods (4 marks)

QUESTION THREE (20 MARKS)

- a) Explain the meaning and purpose of research (8 marks)
- b) Discuss the types of research and their related research designs. (12 marks)

QUESTION FOUR (20 MARKS)

Discuss the measurement and scaling techniques used in research.

QUESTION FIVE (20 MARKS)

Research proposal writing is an art that must be developed and practiced. Discuss in a systematic order the various components of a research proposal.