



MACHAKOS UNIVERSITY

University Examinations For 2021/2022 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

MASTER OF ENVIRONMENT AND COMMUNITY DEVELOPMENT

MASTER OF ENVIRONMENTAL SCIENCE

ESU 800: RESEARCH METHODS AND SCIENTIFIC REPORTING

DATE: 14/12/2021

TIME: 8:30 – 11:30 AM

INSTRUCTIONS: Answer question ONE and any other THREE questions

QUESTION ONE (COMPULSORY) (15 MARKS)

Researchers set out to investigate the hypothesis that poverty causes environmental degradation.

- a) Describe a research design that can be employed in this study (4 marks)
- b) Discuss the sampling design(s) that can be applied in this study (4 marks)
- c) Identify the dependent and independent variables and explain how they are used to generate a conceptual framework in this study. (7 marks)

QUESTION TWO (15 MARKS)

Discuss the scales of measurement one needs to consider when analysing data.

QUESTION THREE (15 MARKS)

Discuss how you will cite references within text and references page (cited references) using a standard referencing system for the following:

- a) A Journal Article with Eight or more Authors (5 marks)
- b) Chapter in a Book (5 marks)
- c) Article retrieved from an online database (5 marks)

QUESTION FOUR (15 MARKS)

Discuss the factors that influence reliability and validity in research and indicate how they can be mitigated.

QUESTION FIVE (15 MARKS)

Discuss appropriate techniques in designing and administering a questionnaire to ensure maximum quality of responses