MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL MANAGEMENT & CURRICULUM STUDIES

FIRST YEAR FIRST SEMESTER EXAMINATIONS FOR MASTER OF EDUCATION DEGREE IN EDUCATION

ECC800: RESEARCH METHODOLOGY IN EDUCATION

DATE: 16TH JANUARY, 2025 **TIME: 9.00 AM – 12.00 PM**

INSTRUCTIONS:

Answer Question ONE and any other Three Questions

QUESTION ONE (COMPULSORY) (15 Mks)

a) Explain FOUR functions of concepts in scientific inquiry (4 Mks)

b) From the following research topic, identify the variables it includes:
Socio-economic determinants in the performance of students in public secondary schools in KCSE examination in Machakos County, Kenya (3 Mks)

c) Describe FOUR items included as part of appendices in a research report (8 Mks)

QUESTION TWO (15 Mks)

a) Explain any SEVEN ways you would adopt to identify a specific topic for research you intend to conduct (7 Mks)

b) (i) Apart from interview schedule, name two other data collection methods (2 Mks)

(ii) Using suitable examples, explain **three** disadvantages of using an interview to collect data in research (6 Mks)

QUESTION THREE (15 Mks)

a) (i) Identify a situation in which you would conduct an experiment in the field of education (2 Mks)

(ii) Name the two groups that are involved in an experiment (2 Mks)

(iii) Use the data provided in the table below to create two equivalent forms through randomization for an experiment research that you intend to conduct (5 Mks)

Student	Score in a mathematics test (%)
A	65
B	57
C	83
D	74
E	59
F	92
G	51
H	66
I	70
J	54
K	68
L	85

b) Describe some THREE challenges that may affect conducting an experiment in education (6 Mks)

QUESTION FOUR (15 Mks)

a) Justify FIVE economic advantages of taking a sample over a census in conducting research (5 Mks)

b) Describe the sampling procedure to select a sample in research (10 Mks)

QUESTION FIVE (15 Mks)

a) Using suitable examples, explain THREE challenges students face when formulating the background to a study (3 Mks)

b) Explain SIX reasons for a review of literature in Educational Research (6 Mks)

c) Using suitable examples, explain THREE ethical principles that should be adhered to in scientific research (6 Mks)