



# MACHAKOS UNIVERSITY

University Examinations 2022/2023 academic year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND SPECIAL NEEDS

EDUCATION

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

DOCTOR OF PHILOSOPHY (PSYCHOLOGY)

ECC 900: ADVANCED RESEARCH METHODS IN EDUCATION

DATE:13/10/2023

TIME: 9:00-12:00 P.M

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**INSTRUCTIONS: Answer Question One and Any two others**

1. (a) Identify One issue in your area of specialization:
  - (i) Make a brief statement of a possible problem. (2 marks)
  - (ii) State one objective related to the problem. (2 marks)
  - (iii) Suggest a suitable research design you would recommend. (2 marks)
  - (iv) Suggest a sampling technique you would use to obtain a suitable sample. (2 marks)
  - (v) Describe two research instruments you would use to collect data. (4 marks)
  - (vi) Suggest a data analysis technique you would adopt and why? (2 marks)
- (b) Illustrate the meaning of each of the following terms: (6 marks)  
FRAME ERROR; SAMPLING ERROR; RESPONSE ERROR.
2. Clearly explain the difference between the three types of research:
  - (I) Exploratory Research. (4 marks)
  - (II) Descriptive Research. (4 marks)
  - (III) Causal Research. (4 marks)
- (c) Identify one research issue that can be investigated through each of the three types of research. (3 marks)

3. (a) Briefly explain the essence of each of the following Qualitative Research Methods: (8 marks)
- (i) Observation.
  - (ii) Interview.
  - (iii) Focus Group Discussion.
  - (iv) Survey.
- (b) Distinguish between the Convergent Parallel Design and the Explanatory Sequential Design. (4 marks)
- (c) Describe how you would implement one of the above designs in your area of specialization. (3 marks)
4. (a) Outline and illustrate FIVE ways of identifying a Research Problem. (5 marks)
- (b) Explain the importance of piloting research instruments. (4 marks)
- (c) Discuss any two methods of ensuring the reliability of research instruments. (6 marks)
5. (a) Explain the Solomon's Four Non Equivalent Group Design for Quasi-Experimental Research. (5 marks)
- (b) Explain how you would implement this design with reference to a named educational issue. (6 marks)
- (c) Distinguish between the: Triangulation Research Design and The Embedded Research Design. (4 marks)