



ZIMBABWE EZEKIEL GUTI UNIVERSITY

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FACULTY OF HUMANITIES, EDUCATION AND SOCIAL SCIENCES

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DEPARTMENT OF EDUCATION AND LEADERSHIP DEVELOPMENT

EXAMINATION PAPER

COURSE CODE : EPR 101 & 201  
COURSE TITLE : Research Methods and Statistics  
DURATION : 3 Hours  
DATE : 14 NOV 2019

**INSTRUCTIONS TO CANDIDATES:**

1. Answer any **THREE** questions only, **but do not answer more than two questions from one section.**
2. Each question carries 100 marks
3. Start each question on a new page of your answer sheet.

## SECTION A: RESEARCH METHODS

1. Assess the claim that funding is the main factor which influences the choice of a research method.
2. Examine how one can enhance validity and reliability in educational research.
3. Evaluate the effectiveness of the quantitative research approach in studying human behaviour.

## SECTION B: STATISTICS

### Question 1

a) Define each concept with the aid of an example

i) Variable (2)

ii) Dependent variable (2)

b) A total 12 students obtained the following marks in Maths and Science.

Maths	74	74	68	74	68	72	68	72	79	68	68	74
Science	75	80	71	79	71	80	69	75	80	69	71	75

i) Calculate the modal score for Maths Scores (1)

ii) Find the median of Science scores (1)

iii) Compute the standard deviation for Maths scores (6)

iv) Find the z score for 72 in the Maths distribution (3)

v) Calculate the Spearman rank order correlation coefficient (8)

vi) Comment on the strength of the correlation coefficient (2)

### Question 2

- a) What is the Hawthorne Effect (2)
- b) State one limitation of mean (2)
- c) The table shows the performance of 10 students in Psychology and Statistics.

Psychology	48	35	36	43	33	45	37	44	38	46
Statistics	47	32	38	42	41	43	33	47	46	44

- i) Find the range for Statistics scores (1)
- ii) Calculate the median for Psychology scores (2)
- iii) Find the variance for Statistics scores (6)
- iv) Calculate the Pearson Product Moment Correlation Coefficient for the Psychology distribution (10)
- v) Comment on the strength of the correlation coefficient (2)

### Question 3

- a) Define standard deviation (2)
- b) What is mean deviation? (2)
- c) Ten students wrote two tests and obtained the following marks

Test 1	25	35	30	30	25	30	43	25	35	25
Test 2	31	42	50	42	31	35	42	31	42	31

- i) Find the mode for Test 2 (1)
- ii) Calculate the standard deviation for Test 1 (6)
- iii) Find the z score for 30 in the Test 1 distribution (2)
- iv) Compute Spearman Rank Order correlation coefficient (10)
- ii) Comment on the strength of correlation (2)

**END OF EXAMINATION**