



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF HUMANITIES, EDUCATION AND SOCIAL SCIENCES

DEPARTMENT OF EDUCATION AND LEADERSHIP DEVELOPMENT

EXAMINATION PAPER

PROGRAMME: BACHELOR OF EDUCATION HONOURS DEGREE IN ECD
COURSE CODE: EPR 124
COURSE TITLE: RESEARCH METHODS AND STATISTICS
DURATION: 3 Hours
DATE: 07 OCT 2022

INSTRUCTIONS TO CANDIDATES:

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

SECTION A

1. Tendai is an educational researcher who intends to investigate the causes of child abuse in Boka village. Participants of the study indicate that they need assurance of their privacy. Advise Tendai on what she has to do before and after conducting the study [100].
2. Susan is studying the perceptions of teachers on the use of online teaching to ECD learners. She has identified Experiments and Focus Group Discussions as data generation methods.
 - a) Which method is the most applicable in this study? [5]
 - b) Justify the use of that method and the inapplicability of the other method [95].
3. You are about to undertake educational research in your area of interest.
 - a) Formulate a researchable topic [10]
 - b) Craft the research aims, questions and objectives of that topic [90]

SECTION B

4. Mr Mayo's class wrote a test and the following data shows scores obtained in that test:
21 27 29 24 22 34 30 20 42 47
35 33 28 31 33 37 46 37 38 34
 - a) Construct a frequency distribution table for him (5)
 - b) Using the above data find:
 - i. Mean (5)
 - ii. Mode (5)
 - iii. Median (5)
 - iv. Inclusive range(5)
 - v. Variance (10)
 - c) Give the merits and demerits of using the above measures of central tendency (15)
 - d) Compute the standard deviation of the scores and comment on its use in educational research (40)
 - e) State any **five** characteristics of a normal distribution (10)
5. Peter is presenting his findings quantitatively. However, he is not sure of some terms in use. He asked you to distinguish between the following:

- a) Descriptive statistics and inferential statistics (5)
- b) Standard deviation and variance (5)
- c) True Experimental design and the Ex Post Facto design (5)
- d) Mean and median (5)
- e) Part of Peter 's data include the following distribution 10.5; 7.2; 4.3; 7.9; 3.8; 8.3; 3.4; 4.1; 12.3 and 6.2

Calculate for him the:

- i. Mean (2)
 - ii. Median (2)
 - iii. Mean deviation (10)
 - I. Variance (6)
 - II. Z score for 7.9 (5)
- f) Ten unnamed candidates at ZEGU sat for examinations in Physics and Chemistry. Below is the table that shows the results

Physics (x)	16	20	80	40	46	54	60	80	88	92
Chemistry (y)	42	54	60	54	62	68	80	66	80	100

- i) Calculate the Pearson Product Moment correlation coefficient. (25)
- ii) Compute Spearman's Rank Order Correlation Co-efficient (25)
- iii) Comment on the strengths of the two correlations above (5)

6a). With the aid of examples define the following terms:

- i. Descriptive statistics (5)
 - ii. Inferential statistics (5)
 - iii. Raw data (5)
 - iv. Population (5)
 - v. Sample (5)
- b) A secondary school in Bindura is investigating the possibility of assessing the suitability of form 1 applicants using Examinations results instead of Entrance tests procedure. A comparative test on ten applicants was conducted using both methods. The following were the results:

Learner	A	B	C	D	E	F	G	H	E	F
Exam Results	80	67	60	68	74	56	71	52	73	84
Entrance Test Results	80	65	58	53	70	57	73	54	74	88

- i. Calculate the standard deviation for the Entrance test results and for variance of the Examination results (60)
- ii. In which of the above two sets of scores did student A perform better and why (15)

THE END

310 AM