



**ZIMBABWE EZEKIEL GUTI UNIVERSITY**

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**FACULTY OF EDUCATION, GOVERNANCE, THEOLOGY AND  
LEADERSHIP**

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**DEPARTMENT OF CURRICULUM AND EDUCATIONAL PHILOSOPHY**

**EXAMINATION PAPER**

**MODULE CODE** : EPR 124  
**MODULE TITLE** : RESEARCH METHODS AND STATISTICS  
**DURATION** : 3 Hours  
**LEVEL** : 1.2  
**DATE** : 29 NOV 2024

**INSTRUCTIONS TO CANDIDATES:**

1. Answer three (3) questions, **but not more than two questions from one section.**
2. Each question carries (100) marks.
3. The number of marks for part questions is shown in brackets.
4. Start each question on a new page.
5. This paper consists of four (4) pages

**ADDITIONAL REQUIREMENTS**

1. Formulae Sheet
2. Calculator



### SECTION A: RESEARCH METHODS

1. Discuss the major features of a research proposal.  
(100)
2. Compare probability and non-probability sampling techniques.  
(100)
3. Justify the practice of reviewing literature when carrying out a study.  
(100)

### SECTION B: STATISTICS

#### Question 4.

##### A. Define the following statistical terms

- i. median (3)
- ii. mode (3)
- iii. mean (3)
- iv. standard deviation (3)

##### B. The table below shows marks obtained by ten learners in Geography and Statistics.

Learner	Geography	Statistics
A	60	78
B	65	65
C	80	89
D	70	90
E	76	100
F	56	68
G	57	65
H	67	74
I	60	49
J	72	59

- i. Calculate the range for the Statistics scores  
(3)



- ii. Compute the standard deviation for the Geography scores (20)
- iii. Find the variance of the Geography scores. (20)
- iv. Calculate the mean deviation of the statistics scores (10)
- v. In which subject did learner B perform better? Justify your answer. (15)
- vi. Compute the z-score for Geography. (20)

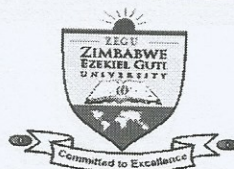
**Question 5 A**

- i. What type of measurement does Pearson's Product Moment Correlation measure? (4)
- ii. State the coefficient range in the Pearson Product Moment Correlation Coefficient. (4)
- iii. What does coefficient 0 imply in the Pearson Product Moment correlation? (4)
- iv. State the two measurements at the centre of the Pearson Product Moment correlation (4)
- v. Illustrate diagrammatically a perfect positive correlation (10)

**A. Complete the table below about Spearman's rank order Correlation Coefficient**

Table 2

coefficient	Strength of the coefficient
0.76	
0.4	
-1	
+1	
0.11	



(10)

**C. The table below shows marks obtained by 10 students in Accounting and Biology tests.**

Table 3

Student	A	B	C	D	E	F	G	H	I	J
Accounting	80	78	76	56	90	48	66	75	83	73
Biology	76	69	72	61	72	52	66	69	87	72

- i. Calculate the mean for the biology marks. (5)
- ii. Find the modal mark for biology. (4)
- iii. Calculate the range of marks for Accounting. (5)
- iv. Compute the median mark for Accounting (5)
- v. Using the data from table 3, calculate the Pearson Product Moment Correlation Coefficient (40)
- vi. Comment on the strength of the relation of the correlation coefficient (5)

**Question 6 A**

- i. What are the differences between a perfect positive correlation and a perfect negative correlation (5)

**B. What are the advantages of the following statistical measures?**

- i. Mean (4)
- ii. Median (4)
- iii. mode (4)

**C. What are the weaknesses of the following statistical measures?**

- i. mode (4)
- ii. Mean (4)
- iii. Median (4)



**D. The table below shows marks obtained by 10 students in Maths and English tests.**

Table 4

Student	A	B	C	D	E	F	G	H	I	J
Maths	68	79	80	68	81	79	69	81	90	85
English	72	72	72	70	64	79	63	92	78	75

- i. Calculate the mean for the maths marks (5)
- ii. Compute the z-score for the English marks (15)
- iii. Find the inclusive range of the maths marks (6)
- iv. Calculate the variance of the English marks (15)
- v. Use the data in Table 4 to calculate the Spearman's rank order correlation coefficient. (25)
- vi. Comment on the strength of correlation coefficient (5)

**THE END**

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