



KIBABII UNIVERSITY

**UNIVERSITY EXAMINATION
ACADEMIC YEAR 2022/2023**

FIRST YEAR FIRST SEMESTER REGULAR EXAMINATION

**DOCTOR OF PHILOSOPHY IN EDUCATIONAL MANAGEMENT AND POLICY
STUDIES / EDUCATIONAL PLANNING AND MANAGEMENT**

COURSE CODE: EPM 914

COURSE TITLE: BASIC EDUCATION STATISTICS

DATE: 1/2/2023

TIME 2.00PM-5.00PM

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES

Answer Question One (compulsory) and Any other TWO (2) Questions

*KIBU observes ZERO tolerance to examination cheating
This Paper Consists of 3 Printed Pages. Please Turn Over.*

QUESTION ONE

- a) What is the difference between a discrete and a continuous variable? [2 marks]
- b) What is a frequency table? [2 marks]
- c) Why do researchers make histograms? [2 marks]
- d) Fifty postgraduate students were asked how many hours they use to study for an examination in a university. Here are their answers:
11, 2, 0, 13, 5, 7, 1, 8, 12, 11, 7, 8, 9, 10, 7, 4, 6, 10, 4, 7, 8, 6, 7, 10, 7, 3, 11, 18, 2, 9, 7, 3, 8, 7, 3, 13, 9, 8, 7, 7, 10, 4, 15, 3, 5, 6, 9, 7, 10, 6

Use the data to answer the questions that follow;

- i. Group the data and make a frequency table [3marks]
- ii. Draw a histogram. [3 marks]
- iii. Describe the general shape of the distribution. [2 marks]
- iv. Calculate the measures of central tendency [10 marks]
- v. Calculate the variance [4 marks]
- vi. Calculate standard deviation [2 marks]

QUESTION TWO

- a) What is a Z score [2 marks]
- b) An education researcher has the mean of 79 and the standard deviation is 12. What is the Z scores for each of the following raw scores from his data? 91 and 68 [4 marks]
- c) Why is the normal curve so common in nature? [3 marks]
- d) Explain the difference between the population and a sample for a research study. [3 marks]
- e) Explain the difference between a population parameter and a sample statistic. [3 marks]

QUESTION THREE

1. the score of an achievement test of 50 students are as follows :

Scores	Frequency
70-74	2
65-69	4
60-64	5

55-59	6
50-54	7
45-49	11
40-44	9
35-39	3
30-34	2
25-29	1

- a) Calculate the mode [4marks]
- b) Give the four Characteristics of Mode : [4 marks]
- c) Calculate the mean [3 marks]
- d) Explain in what condition median is better measure of central tendency than mean. [4 marks]

QUESTION FOUR

- (i) What is data analysis? [2 marks]
- (ii) What are the two types of statistics? [2 marks]
- (iii) Give reasons why Post graduate students need statistics [8 marks]
- (iv) Some of the items in a school workshop are given below. Use it to construct a bar chart [3 marks]

Hammer	30
Plier	25
Files	25
Punches	20
Spanners	15
Dies	10
Tapes	5
Screw drivers	45
Saws	25
Vices	20

QUESTION FIVE

The scores for twelve students in Research Method and Education statistics in Kibabii University is given in the table below, calculate the Pearson Product Moment Correlation Coefficient (r) between Research Method and Education statistics. What is the interpretation of the correlation results?

[15 marks]

Student	1	2	3	4	5	6	7	8	9	10	11	12
Research Method	31	24	50	12	45	47	09	51	25	60	15	10
Education statistics	29	21	25	11	30	41	01	44	11	55	05	03