



# KIBABII UNIVERSITY

## UNIVERSITY EXAMINATION ACADEMIC YEAR 2020/2021

### SECOND YEAR SECOND 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: 8<sup>th</sup> OCTOBER, 2021 TIME: 2.00-5.00**

**DURATION: 3 HOURS**

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#### INSTRUCTIONS TO CANDIDATES

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

1. (a) Give the level of measurement of each of the following variables: (3 marks)
  - i) A person's nationality (Kenyan, Mexican, Chinese, Ethiopian, Australian, etc.),
  - ii) a person's score on a standard IQ test,
  - iii) A person's place on a waiting list (first in line, second in line, etc.).
- (b) What is the difference between a discrete and a continuous variable? (2 marks)
- (c) Ten first-year university students rated their interest in graduate school on a scale from 1 = no interest at all to 6 = high interest. Their scores were as follows: 2, 4, 5, 5, 1, 3, 6, 3, 6, 6.
  - (i) Make a Frequency Table (2 marks)
  - (ii) Make a Histogram (3 marks)
- (e) Name and define three measures of central tendency. For the following scores, find the three: measures of central tendency 5, 3, 2, 13, 2. (10 marks)

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2. 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 (5 marks)
- d) Give the advantages using mean. (3 marks)
- e) Explain in what condition median is better measure of central tendency than mean. (4 marks)

3. Find rank correlation coefficient from the following data and interpret the results. (20 marks)

Individuals	A	B	C	D	E	F	G	H
Marks in History	55	60	45	40	52	39	38	65
Marks in Geography	62	53	55	48	45	50	42	54

4. Consider the following group of scores: (20 marks)

Group A: 10, 20, 20, 20, 20, 20, 20, 20

Group B: 3, 4, 7, 8, 9, 10, 11, 12

- (a) Find the range and the standard deviation for each of the two groups. Which group has less dispersion based on the range? Which of the two groups has less dispersion based on the measure of the standard deviation? (10mks)
- (b) Calculate for the CV for each of the two groups. (10mks)