



KIBABII UNIVERSITY

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

SECOND YEAR SECOND SEMESTER

**FOR THE DIPLOMA
IN
CRIMINOLOGY & SOCIAL WORK**

COURSE CODE: DCR 064

COURSE TITLE: SOCIAL STATISTICS

DATE: 21ST/JULY/2021

TIME: 2PM - 4PM

INSTRUCTIONS TO CANDIDATES

Answer question ONE (30 marks) and any other TWO questions (20 marks each)

TIME: 2Hours

Kibabii University observes ZERO tolerance to examination cheating

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DCR 064 – SOCIAL STATISTICS – EXAM 1

QUESTION ONE (COMPULSORY)

- a) The management of a community-based organization is investigating the length of time the suppliers take for them to be paid, with the normal terms being a net of 30 days. It checked the payment record of 100 suppliers who were chosen at random as shown in the table

Payment in days	Number of Suppliers
5 - 9	4
10-14	10
15 -19	17
20 - 24	20
25 - 29	22
30 - 34	16
35- 39	8
40 - 44	3

Required;

- | | | |
|------|---|-----------|
| i) | Calculate the arithmetic mean | [4 marks] |
| ii) | Find the geometric mean | [4 marks] |
| iii) | Calculate the Harmonic mean | [3 marks] |
| iv) | Calculate the median payment value | [4 marks] |
| v) | Calculate the standard deviation | [4 marks] |
| vi) | Calculate the mode payment value | [3 marks] |
| b) | Briefly explain three functions of statistics | [3 marks] |
| c) | Distinguish between the parametric and non-parametric tests | [2 marks] |
| d) | Outline three non-parametric test. | [2 marks] |

QUESTION TWO

Two project managers were asked to rank a group of workers in order of their potential for eventually becoming top level managers. The ranking was as follows;

Employee	A	B	C	D	E	F	G	H	I	J
Manager I	10	2	1	4	3	6	5	8	7	9
Manager II	9	4	2	3	1	5	6	8	7	10

Required:

- | | | |
|-----|--|------------|
| i) | Compute the Spearman's rank coefficient r and comment on the value | [10 marks] |
| ii) | Compute the product moment correlation coefficient | [10 marks] |

QUESTION TWO

- a) Define the term 'statistics' and briefly explain any five of its functions [10 marks]
- b) Explain the meaning of measurement in research [2 marks]
- c) Explain the four different measurement scales used in research [4 marks]
- d) Point out the possible sources of errors in measurement [4 marks]

QUESTION THREE

Smoother Limited has been concerned by the absenteeism of its employees. A study produced the data below

Number of days absent	0-2	3-5	6-8	9-11	12-14	15-17
Number of employees	3	8	20	12	6	1

- a) Briefly describe the following [6 marks]
 - i) Leptokurtic
 - ii) Mesokurtic
 - iii) Platykurtic
- b) Using a Provisional Mean of 7, find arithmetic mean and the standard deviation [6 marks]
- c) Find the pearson's coefficient of skeweness [4 marks]
- d) Find the Bowley's coefficient of skewness [4 marks]

QUESTION FOUR

Consider the following data;

Class	10-19	20-29	30-39	40-49	50-59	60-69
Frequency						

- a) Using the data as given, compute for; [14 marks]
 - i) Lower quartile
 - ii) Upper quartile
 - iii) Interquartile range
 - iv) Interquartile deviation
- b) Draw an ogive and indicate; [6 marks]
 - i) Q_1
 - ii) Q_3

QUESTION FIVE

- a) Briefly explain any three merits and three demerits of standard deviations [6 marks]
- b) calculate the range and the quartile deviation for each of the following [4 marks]
 - i) 16,13,24,40,6,20,18,17
 - ii) 53,42,36,41,43,39,25
- c) Normal distribution is one of the most important distributions in social sciences. Briefly describe any two reasons as to why [5 marks]
- d) Outline any four characteristics of a normal curve [5 marks]