



PAN AFRICA CHRISTIAN UNIVERSITY

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

**END OF SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN COMMUNITY DEVELOPMENT**

SEPTEMBER-DECEMBER 2022 TRIMESTER

CAMPUS: ROYSAMBU

DEPARTMENT: COMMUNITY DEVELOPMENT

COURSE CODE: CDC 313/COM 302

COURSE TITLE: SOCIAL STATISTICS

EXAM DATE: DECEMBER 2022

DURATION: 3 HOURS

TIME:

INSTRUCTIONS

- Read the instructions and questions carefully before you write the answers.
- **Answer any TWO questions**
- *ALL PAC University's examination rules and regulations apply*

Question One

- a) Explain any **four** statistical methods you would use to measure dispersion. (4 marks)

- b) Find the range and coefficient of range: Formula
(4 marks)

$$\text{RANGE} = H - L$$

$$C.R = \frac{H - L}{H + L}$$

X	10	20	30	40	50	60	70
F	15	18	25	30	16	10	9

- c) Outline any **two** ways you would distinguish descriptive from inferential statistics. (2 marks)
- d) Explain **five** steps in inferential statistics that you would use to determine if sample means came from the same population. (10 marks)

Question Two

- a) Calculate the standard deviation of the following data of a sample. Use the formula

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

(8 marks)

16, 20, 18, 19, 20, 20, 28, 17, 22, 20

- b) Using the following group data to calculate:

X	0-10	10-20	20-30	30-40	40-50
F	2	7	10	5	3

- i. Mean (2 marks)
 - ii. Mode (2 marks)
 - iii. Variance (4 marks)
- c) Explain the meaning of type I error and type II error in statistics (4 marks)

Question Three

- a) Explain **three** methods you would use to study correlation. (6 marks)
- b) Give any **two** reasons why correlation is important. (4 marks)

- c) Distinguish correlation from regression. **(2 marks)**
- d) A professor collected information from college students on the number of movies they watched per week and the number of hours they spent studying per week. Determine r . **(8 marks)**

Formula is $r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$

X (M)	10	7	6	5	3	2	2	1	0
Y(Hrs)	1	3	9	10	3	22	25	40	37