PAN AFRICA CHRISTIAN UNIVERSITY

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

END OF SEMESTER EXAMINATION FOR THE DEGREE OF

BACHELOR OF ARTS IN COMMUNICATION

MAY-AUGUST 2026 TRIMESTER

CAMPUS: ROYSAMBU

DEPARTMENT: COMMUNICATION, LANGUAGES AND LINQUISTICS

COURSE CODE: COM 301

COURSE TITLE: COMMUNICATION STATISTICS

EXAM DATE: FRIDAY 31ST JULY 2026

DURATION: 3 HOURS

INSTRUCTIONS

- Write only your **student number** on the answer booklet provided.
- **Read the instructions and questions carefully before you write the answers.**
- **Question one is compulsory choose any other two questions.**
- **ALL PAC University's examination rules and regulations apply**

SECTION A: COMPUSORY

QUESTION ONE

a) Explain the meaning of the following terms as applied in Social Statistics
   i. Population
   ii. Sample
   iii. Variable
   iv. Data (4 Marks)

b) Differentiate between each of the following terms:

   i. Descriptive and inferential statistics

   ii. Primary and Secondary data

   iii. Point and interval estimation (6 Marks)

c) Outline the three advantages and two disadvantages of mean as measure of data.

   (5 Marks)

d) The table represents the ages of 300 community members who attended a chiefs baraza. Study it and answer the questions that follow.

Age	21 – 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60
Frequency	18	32	43	57	69	46	29	6

Calculate:

i. The Mean Age (3 Marks)
ii. The Median Age (4 Marks)
iii. The Mode Age (3 Marks)
iv. The standard deviation of the data (5 Marks)

SECTION B: CHOOSE ANY THREE QUESTIONS

QUESTION TWO

The heights of male officers at a police station are normally distributed with a mean of 150cm and a standard deviation of 10 cm.

a) Find the probability that a male officer selected at random would have a height of less than 165cm. (3 Marks)
b) Find the probability that a male officer selected at random would have a height greater than 165cm. (3 Marks)
c) If there are 400 males in the station, calculate how many would be expected to be taller than 170cm (4 Marks)
d) If 15% of the males have a height that is less than the females' mean height, determine the female's mean height (5 Marks)

QUESTION THREE

a) Citing relevant examples explain FIVE functions of statistics in the contemporary world.

(5 Marks)

b) A sociologist was hired by a large city hospital to investigate the relationship between the number of unauthorized days that an employee is absent per year and distance in kilometers between home and work place for the employees. A sample of 10 employees were chosen and the following data was collected;

Distance to work (km) X axis	1	3	4	5	6	8	10	12	14	14
Number of days absent Y axis	8	5	8	7	6	3	5	2	4	2

Required

i. Compute the regression equation y = a +of number of days absent on distance to work (8 Marks)

ii. Determine the number of days absent if the distance to work is 7 kilometers (2 Marks)

$$b = \frac{n\sum xy - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

$$a = \frac{\sum y - b\sum x}{n}$$

QUESTION FOUR

a) An insurance company has two claim assessors who must each give approval to customers who wish to log a claim for compensation. The manager currently has eight such customers and has asked each assessor independently to rank the customers claim in order of merit. The ranking are shown below

Customer	A	B	C	D	E	F	G	H
Assessor 1 ranking	4	6	2	1	5	8	6	3
Assessor 2 ranking	4	8	1	3	7	4	6	2

Required

i. Calculate the rank coefficient of correlation of the two sets of ranking (8 Marks)

ii. Comment on each of the results. (2 Marks)

b) The weights of ten couples measured in Kgs are obtained below.

Husband	50	47	55	64	80	68	75	86	92	67
Wife	45	48	50	68	60	62	68	77	84	70

Required

Determine the rank correlation coefficient based on these data (5 Marks)

$R = 1 - \frac{6\sum d2}{N(N^2-1)}$