



PAN AFRICA CHRISTIAN UNIVERSITY
SCHOOL OF LEADERSHIP, BUSINESS & TECHNOLOGY
END OF SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF ARTS IN COUNSELING PSYCHOLOGY
BACHELOR OF ARTS COMMUNICATION
BACHELOR OF BUSINESS LEADERSHIP
BACHELOR OF COMMERCE
SEPTEMBER-DECEMBER 2019

CAMPUS: ROYSAMBU

DEPARTMENT: BUSINESS STUDIES

COURSE CODE: BUS2243 | BCM108 | COM301 | COU4113

COURSE TITLE: STATISTICS

EXAM DATE: FRIDAY 6TH DECEMBER 2019

DURATION: 2 HOURS

TIME: 9:00AM-11:00AM

INSTRUCTIONS

- Read the instructions and questions carefully before you write the answers.
- Write your **STUDENT NUMBER** in the Answer Booklet given
- *Write clearly and legibly.*
- This exam paper contains TWO sections.
- Answer **ALL** questions in **Section A** and **any THREE** questions in section B.
- *ALL PAC University's examination rules and regulations apply*

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1:

- a) The following dataset relates to dataset relates to the marks obtained by pupils of a primary school for the year 2019 KCPE.

(279, 298, 200, 181, 245, 233, 210, 181, 193, 221, 200, 193, 210, 133, 177, 213, 181, 180)

Calculate:

- i) Mean (2 marks)
- ii) Mode (1 mark)
- iii) Median (2 marks)
- iv) Range (1 marks)
- v) Interquartile Range (4 marks)

- b) Calculate the mean for the following grouped data (5 marks)

Attention span in minutes	10-19	20-29	30-39	40-49
Frequency	5	7	8	4

- c) state any three uses of correlation (3 marks)
- d) Illustrate the difference between a normal distribution and skewed distribution (4marks)
- e) Explain any four uses of statistics in your choice of vocation (8 marks)

SECTION B: ANSWER ANY THREE QUESTIONS

QUESTION 2:

The following dataset relates to the number of students who attended chapel services at PAC University over the last 11 weeks.

Week	1	2	3	4	5	6	7	8	9	10	11
No. of students	200	360	400	330	300	366	332	300	300	240	150

Calculate:

- a) Absolute skewness (4 marks)
- b) Interquartile range (6 marks)

QUESTION 3:

The following pairs of data show the number of hours seven students spent on social media and their corresponding level of depression.

Number of hours	5	2	5	4	3	2	6
Level of depression	2	6	3	4	4	3	1

Required:

- a) Calculate the correlation coefficient. (8 marks)
- b) Interpret the result (2 marks)

QUESTION 4:

The following data relates to a student's term Grade Point Average (GPA) and number of units taken per semester

Number of units	2	1	3	4	5	3	6
Term GPA	4.0	3.9	3.5	3.3	2.7	3.2	2.5

Required:

- a) Determine the regression equation of the line for the dataset (8 marks)
- b) Calculate the term GPA when the student takes 7 units (2 marks)

QUESTION 5

The following data gives the frequency distribution of the ages of clients who visited a Counselling Center each day during the past 50 days.

Age	18 – 21	22 – 24	25 - 27	28 - 30
Frequency distribution	4	12	20	14

Required:

- a) Calculate the mean (5 marks)
- b) Present the data in a histogram (5 marks)

QUESTION 6

Giving examples, discuss four levels of measurement in statistics (10 marks)