



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

SEPTEMBER –DECEMBER 2021

FACULTY OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF PSYCHOLOGY

REGULAR PROGRAMME

DCP 016: BASIC STATISTICS IN BEHAVIORAL SCIENCES

Date: DECEMBER 2021

Duration: 3 Hours

INSTRUCTIONS: Answer Question ONE and any THREE Questions

Q1.

- a) Using examples examine the properties of the mean **(6 marks)**
- b) Calculate the mode, median and mean of the following data showing the number of meals per day consumed by children under four years: 4, 4, 5, 7, 4, 3, 3, 2
(6 marks)
- c) Describe the assumptions which are to be met by data of two variables X and Y, being correlated for Pearson Correlation Coefficient (r_{xy}) to be meaningful
(8 marks)
- d) Explain why the standard deviation is the most widely used and preferred measure of variability
(5 marks)

SECTION B: ANSWER ANY THREE QUESTIONS

Q2. Seven students in a certain university scored: 5, 6, 7, 8, 9, 10 and 11 in a certain psychological test

Compute:

- a) Range
- b) mean
- c) absolute mean deviation
- d) Standard deviation
- e) Evaluate would happen to standard deviation if you add 3 to every score in the distribution
- f) Explain would happen to variance if you multiply every score in the distribution by 2

(15marks)

Q3.

- a) Giving relevant examples explain the levels (scales) of measurement in statistics
(12 marks)
- b) The weight of five psychology students in kilograms is; student A 90 Kg, student B 40 Kg, student C 60 Kg, D 65Kg and student D 50 Kg. Present their weight in a pie chart and make interpretations
(3 marks)

Q4. The table below shows the weight of some people who attended a healthy facility in a certain week

Weight in Kg	10-14	15-19	20-24	25-29	30-34	35-39	40-44
Frequency	8	12	18	20	15	4	3

a) Calculate the mean weight **(5 marks)**

b) Calculate the median weight **(10marks)**

Q5. Suppose the following were scores of a small group in two psychological tests, Test A and Test B. Taking Test A as variable X and Test B as variable Y.

NAMES	TEST A (X)	TEST B (Y)
Mark	47	42
Mercy	46	47
Dan	27	22
Lucy	8	7
Janis	8	12

i.
Compute

the

Spearman rank correlation coefficient (ρ), for these two tests and interpret the results **(7 marks)**

Compute the Pearson product moment correlation coefficient and interpret the results **(8 marks)**

END