



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

P.O. Box 62157

00200 Nairobi - KENYA

MAIN EXAMINATION

Telephone: 891601-6

MAY – AUGUST 2021

Ext 1022/23/25

FACULTY OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF PSYCHOLOGY

REGULAR PROGRAMME

DCP 016: BASIC STATISTICS IN BEHAVIORAL SCIENCES

Date: AUGUST 2021

Duration: 3 Hours

INSTRUCTIONS: Answer Question ONE and any other THREE Questions

QUESTION ONE

- a) Calculate the mode, median and mean of the following data showing the number of meals per day consumed by children under five years: 3,3,3,4,5,1,2
(5 marks)
- b) Using examples justify the reasons mean is the most preferred measure of central tendency
(5 marks)
- c) The weight of four psychology students in kilograms is; student A 90 Kg, student B 40 Kg, student C 60 Kg and student D 50 Kg. Present their weight in a pie chart and make interpretations
(7 marks)
- d) Five students scored 40, 50, 60, 70 and 80 in counseling psychology examination. Compute variance and the standard deviation and interpret your results
(8 marks)

QUESTION TWO

- a) Explain the reason psychologists needs to have basic knowledge of statistics (5 marks)

- b) The table below shows the weight of some people who attended a health 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

Calculate their median weight

(10 marks)

QUESTION THREE

- a) Using example, describe the levels (scales) of measurement in statistics

(8 marks)

marks)

- b) The following were scores of a group in two psychological tests, Test P and Test Q. Taking Test P as variable X and Test Q as variable Y.

NAMES	TEST P (X)	TEST Q (Y)
Paul	5	4
Jane	6	6
Max	5	5
Dan	3	2
Lucy	2	3
Lily	3	4

Compute the Pearson product moment correlation coefficient (r_{xy}), for these two tests and interpret the results (7 marks)

QUESTION FOUR

- a) Explain reasons the standard deviation is the most widely used and preferred measure of variability **(5 marks)**
- b) Seven students in a certain university scored: 3,4,5,6,7,8,9 in a certain psychological test

Compute:

- a) Range
- b) mean
- c) absolute mean deviation
- d) Variance
- e) Standard deviation
- f) Evaluate the effect of adding 2 to every score on standard deviation in the distribution **(10 marks)**

QUESTION FIVE

- a) 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

(4 marks)

- b) 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.

Compute the Spearman rank correlation

NAMES	TEST A (X)	TEST B (Y)
Mary	47	42
Man	46	47
Dennis	27	22
Lucky	8	7
Nice	8	12

CUEA/ACAD/EXAMINATIONS/DIRECTORATE OF EXAMINATIONS & TIMETABLING *Page 3*

ISO 9001:2015 Certified by the Kenya Bureau of Standards

coefficient (ρ), for these two tests and interpret the results
(11 marks)

END

DET: MAY 2021