THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

SEPTEMBER – DECEMBER 2019 TRIMESTER

FACULTY OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF PSYCHOLOGY

REGULAR PROGRAMME

MCP 501: STATISTICAL IN BEHAVIORAL SCIENCE

Date: DECEMBER 2019	Duration: 3 Hours
INSTRUCTIONS: Answer ANY FOUR Questions	

Q1.   Given the following scores of seven counseling psychology student in CUEA on a certain psychological test: 8, 9, 10, 11, 12, 13, 14 Compute:
   a) Mean
   b) Variance
   c) Standard deviation
   d) What would happen to standard deviation if you add 3 to every score in the distribution
   e) Explain the meaning of a large value of the mean deviation and high standard deviation score in a psychological test

(17.5 marks)

Q2.   a)   Explain in details giving examples the main characteristics of the four types of measurement levels in statistics

(8 marks)

   b)   Critically explain the steps which a counseling psychologist can employ in hypothesis testing

(9.5 marks)

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Q3. During the psychological test the weight of the students were recorded as show in this table.

CLASS INTERVAL	FREQUENCY (f)
65 – 69	3
60 – 64	4
55 – 59	8
50 – 54	10
45 – 49	9
40 – 44	3
35 – 39	4
30 – 34	1

Using this data, compute;
   a) Mean deviation

(5.5 marks)
   b) Quartile deviation

(8 marks)
   c) Interpret your results

(4 marks)

Q4.   a)   Identify 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)   The following were scores of a group in two psychological tests, Test M and Test N. Taking Test M as variable X and Test N as variable Y.

NAMES	TEST M (X)	TEST N (Y)
JOY	5	4
PAUL	6	6
MERCY	5	5
DANIEL	3	2
BENSON	2	3
AGNES	3	4

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

(13.5marks)

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)
LILY	55	50
PETER	54	55
ROSE	35	30
CALEB	16	15
GRACE	15	20

a) Compute the Spearman rank correlation coefficient (rho), for these two tests and interpret the results

(13 marks)

b) At what circumstance is Spearman rank correlation coefficient, rho = +1   **(2.5 marks)**

c) Explain the main objective of Spearman's coefficient of correlation **(2 marks)**

Q6.   a)   Using relevant examples, examine five properties of the mean
(10 marks)

b) Use graphs to compare the mean, median and mode of a data distribution

(7.5 marks)

END

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