

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS.

EMBU CAMPUS

FIRST YEAR EXAMINATIONS FOR THE AWARD OF DEGREE OF MASTERS IN  
COUNSELING PSYCHOLOGY

MCPS 802: STATISTICAL METHODS IN BEHAVIOURAL SCIENCES

STREAMS: MSC (PSYCHOLOGY) LIBI

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 5/12/2018

2.30 P.M - 5.30 P.M

**INSTRUCTIONS:**

- Answer Question ONE and any other TWO Questions.
- Do not write anything on the question paper

**QUESTION ONE**

- (a) Explain the four scales of measurement clearly showing the relationship among them. [8 Marks]
- (b) The age categories of respondents in a research are indicated as 18-30 years 40, 31- 40 years 60, 41-50 years 20 and 51-60 years 15. Represent the information graphically. [2 Marks]
- (c) Evaluate the following methods of estimating the reliability of a research instrument.  
(i) Test re-test method. [3 Marks]  
(ii) Equivalent form method. [3 Marks]
- (d) Identify two areas in counseling psychology and discuss how each can benefit from the knowledge of statistical methods. [4Marks]

**QUESTION TWO**

- (a) The level of life satisfaction of four clients was assessed and recorded for six months. Test the hypothesis that there is no difference in the life satisfaction of the four clients at  $\alpha=0.05$

[10 Marks]

Joy	Joe	Ann	Tom
45	48	47	47
47	47	48	46

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45	46	46	46
47	47	47	46
48	47	48	47
47	48	46	46

(b) The information in the table below was collected from a counseling centre in Kenya.

Categories	26-30	31-35	36-40	41-45	46-50	51-55
Frequency	8	11	13	10	14	12

- (i) Calculate the median [3 Marks]
- (ii) Compute the mean [2 Marks]
- (iii) Determine the variance [3 Marks]
- (iv) Work out the standard deviation [1 Marks]
- (v) What is the range [1 Mark]

### QUESTION THREE

(a) A researcher wanted to determine whether there is a relationship between the number of counseling sessions and stress level. Data from the research is tabulated below.

Counseling sessions	1	2	3	4	5
Stress levels	12	4	6	8	10

Use rank order correlation coefficient to determine the nature and strength of the relationship [6 Marks]

(b) Four Universities were investigated to find out the counselor's gender that students preferred. Data collected is recorded as follows:

	Male	Female
Umoja Univeristy	420	120
Mwisho University	90	410
Hekima University	330	70
Jijenge University	60	200

Test the hypothesis at  $\alpha=0.05$  that counselors preference among the University students in independent of gender. [14 Marks]

### QUESTION FOUR

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(a) Data in the table below show the attraction and anxiety levels between friends.

Attraction level	2	6	1	3	6	9	6	4
Anxiety level	8	14	5	8	10	15	8	7

(i) Compute the regression equation. [7 Marks]

(ii) What anxiety score can you predict for a person who has an attraction score of 5? [3 Marks]

(b) The control and experimental groups generated the following values;

Experimental	6	7	9	5	4	3	2	8	10	7
Control	3	5	9	4	2	1	0	6	7	4

Test the hypothesis that there is no difference in the means of the experimental and the control groups at  $\alpha=0.05$  [10 Marks]

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