



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2013/2014**

**THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR THE DEGREE  
OF BACHELOR OF ARTS IN PSYCHOLOGY WITH INFORMATION  
TECHNOLOGY**

**(MAIN CAMPUS)**

**APY 303: STATISTICS IN PSYCHOLOGY II**

*Date: 2<sup>nd</sup> April, 2014*

*Time: 2.45 - 5.00pm*

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**INSTRUCTIONS:**

- Answer QUESTION ONE and any other TWO questions.



**APY 303: STATISTICS IN PSYCHOLOGY II**

**Instructions**

**Answers question ONE and any other TWO questions**

1. a). Explain the meaning of the terms below;

i. statistics (3mks)

ii. Sample (3mks)

b). Differentiate between the following terms;

i. Descriptive and inferential statistics (4mks).

ii. Independent and dependent variables (4mks)

c). Explain two properties of Pearson product moment correlation coefficient (4mks).

d). Compute the Pearson correlation coefficient for the following data

x	3	4	6	8	9	11	14
y	2	4	4	5	7	8	9

(8ks)

2. a). Explain Spearman's rank correlation (5ks).

b). For the following set of data compute the spearman's rank correlation coefficient and interpret on the results.

x	70	83	90	65	55	75	80	45
Y	120	130	145	110	135	140	95	100

3. a). Define the term regression (5mks)

b). Given the data below;

Attitude score	60	62	65	70	72	48	53	73	65	80
Productivity index	68	60	62	80	85	40	52	62	60	81

i. calculate the line of regression (12MKS)

ii. Estimate the value of y, when x is 20. (3mks).

4. a. Explain the meaning of the term t distribution (5mks).

b). The manufacturer of a certain make of electric bulbs claims that his bulbs have a mean life of 25 months with a standard deviation of 5 months. A random sample of 6 such bulbs gave the following values.

Life in months; 24, 26, 30, 20, 20, 18.

Test the producer's claim at 1% level of significance? (Given that the tables of values of the appropriate test statistic at the said level are 4.032, 3.707, and 3.499 for 5, 6 and 7 degrees of freedom respectively). (15mks).

5. b). Explain the meaning of the chi( $x^2$ ) distribution (5mks)

b). In certain a malarial campaign in certain area quinine was administered to 812 persons out of a total population of 3248. The number of fever cases is shown below. . (For degrees of freedom 1, 2, 3, and 4 the corresponding chi values are 7.88, 10.6, 12.6 and 14.9 respectively)

Treatment	fever	No fever
Quinine	20	792

No quinine	220	2216
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Discuss the usefulness of quinine in controlling malaria (15mks).