MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

FIRST YEAR FIRST SEMESTER EXAMINATIONS FOR THE DEGREE OF MASTER OF EDUCATION (SPECIAL NEEDS)

(CITY CAMPUS)

EDU 801: RESEARCH METHODS I

Date: 25th November, 2013   Time: 2.00 - 5.00 p.m.

INSTRUCTIONS:

- **Answer ANY THREE questions**

EDU 801: RESEARCH METHODS ONE

INSTRUCTIONS: Answer any THREE Questions

Q1. Given the following variables X and Y

Variable X	58	57	38	19	18
Variable Y	53	58	33	18	23

(i) Calculate the relationship using Pearson's product moment correlation co-efficient. **15marks**

(ii) Determine if the calculated value is significant. **5marks**

Q2. Students suspected that their professor's multiple choice test were biased in terms of how often each of the five alternatives was correct. The professor got concerned and decided to evaluate all the previous semesters multiple choice. There were 420 multiple choice items in the sample and the frequency was as follows:

A 100 B 95 C 90 D 102 E 33

(i) Formulate the null hypothesis **3marks**

(ii) What is the alternative hypothesis? **2marks**

(iii) Calculate the Chi Square (X^2) and determine the relationship between the calculated value and the critical value at $p \leq 0.05$ level of significance. **15marks**

Q3. From the list of data given below:

22 16 28 22 26 22 14 20 25 26 28 21 18

20 19 25 23 33 24 16 31 25 23 32 26 31

34 30 27 21 23 27 19 24

(i) Make a cumulative frequency above and below for each class interval (i=3) **6marks**

(ii) Plot (on graph paper) a histogram and frequency polygon for the data in Q 3(i) above **(10marks**

(iii) Comment on the distribution of the scores whether positively or negatively skewed. **4marks**

Q4. The following scores were obtained when a group of 11 students were tested on two tests. Test A and Test B

Test A 5 5 7 8 6 9 7 8 11 9 10

Test B 5 6 7 7 8 8 9 9 10 11 12

(i) Plot a scatter diagram for the above data (use graph paper). **5marks**

(ii) Compute the Spearman correlation co-efficient (rho) for the above data. **12marks**

(iii) Determine if the calculated value is significant at $p \leq 0.01$ and 0.05 level of significance. **3marks**