UNIVERSITY OF SWAZILAND

INSTITUTE OF POST GRADUATE STUDIES

DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND MANAGEMENT
NOV/DEC, 2008

FINAL EXAMINATION PAPER
MASTER OF EDUCATION (M.Ed)

COURSE CODE	:	**EDF / EDC 620**
TITLE OF PAPER	:	**QUANTITATIVE RESEARCH METHODS**
TIME ALLOWED	:	**THREE (3) HOURS**
INSTRUCTIONS	:	**(I) ANSWER ALL QUESTIONS** **(II) SOME STATISTICAL FORMULAE ARE ATTACHED**
TOTAL MARKS	:	**100**

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION TO DO SO HAS BEEN GRANTED BY THE INVIGILATOR.

Question 1

A researcher wanted to see whether there was a relationship between being motivated in one's studies and one's level of creativity. He measured 8 students on both motivation and creativity and obtained the following set of ranks.

Pupil	**Motivation**	**Creativity**
A	1	2
B	2	1
C	3	3
D	6	7
E	8	9
F	7	8
G	5	4
H	8	5

(a) What statistic would he use to test this relationship and why? (5 marks)

(b) Compute the statistic and fully discuss the meaning of your answer (20 marks)

(c) State (i) a null hypotheses and an (5 marks)
(ii) alternate hypothesis the researcher can formulate. (5 marks)

(d) What scale of measurement was used? Justify your answer. (5 marks)

Question 2

Briefly analyse the following indicating when you can use each of them.
(a) The chi-squared test (15 marks)
(b) One-way Analysis of Variance (15 marks)

Question 3

Giving examples, differentiate between:
(a) descriptive and inferential statistics. (10 marks)
(b) parametric and non-parametric statistics (10 marks)
(c) one-tailed and two-tailed tests. (10 marks)

1. Standard Deviation

$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{N - 1}}$$

2.

$$\frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[(N\sum X^2 - (\sum X)^2 (N\sum Y^2 - (\sum y)^2)]}}$$

3.

$$rho = 1 - \frac{6\sum d^2}{N(N^2 - 1)}$$