UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER 2011

TITLE OF PAPER	**:**	**RESEARCH METHODS**
COURSE CODE	**:**	**ST332**
TIME ALLOWED	**:**	**2 (TWO) HOURS**
REQUIRMENTS	**:**	**NONE**
INSTRUCTIONS	**:**	**ANSWER BOTH QUESTIONS IN PART ONE AND ANY THREE QUESTIONS IN PART TWO. ALL QUESTIONS CARRY EQUAL MARKS.**

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

PART A: ANSWER BOTH QUESTIONS:

QUESTION ONE. [4 x 5 = 20 marks]

For each of the following problems, three possible conclusions are given. Choose the most correct one and justify your choice:

1.1 A psychologist has noticed that people who are depressed also seem to have the less social support. She randomly selected 10 male and 10 female patients from all of her patients and asked them to complete the 'Perceived Social Support scale' (measured on a scale of 1–20; 20 = high social support) and the Beck Depression Inventory (measured by 0 and1; 0 = not depressed and 1 = depressed). The psychologist calculates the correlation between the level of social support and presence of depression.

(a) The two variables are negatively correlated.
(b) The two variables are positively correlated.
(c) These two variables are not suitable for computing correlation coefficient

1.2 Suppose you want to conduct a survey among students of your university about their opinion on improving the existing Education System. You know that the university authority allows students to use their list of faculty-wise enrolled students in any academic year. Hence, you consulted two experts for the advice on how to select the students. First expert advised to draw 300 students at random without replacement and the second expert suggested selecting 300 students using stratified random sample. Which advice will you follow so that you can have a better result?

(a) Advice of first expert.
(b) Advice of second expert.
(c) None.

1.3 A survey is carried out by the City Council to determine the distribution of school going children in the city. They draw a simple random sample of 1000 households; but after several visits at different time of the day, the interviewers find people at home in only 921 of the sample households. Rather than face such a high non-response rate, the City Council draw a second batch of households, and use the first 79 completed interviews in the second batch to bring the sample up to its planned strength of 1000 households. They count 3951 people in these 1000 households, and estimate the average number of school going children in the city to be about 3.9. This estimate is likely to be

(a) high.
(b) low.
(c) about right.

1.4 An NGO needed a representative sample of school students. To draw the sample, they first stratified the population of all schools by four regional groups. Then, they again stratified all schools by urban and rural schools in each region. That created a total of 8 school regions. From each school region, a sample of 100 students was selected using simple random sampling method.

(a) This sample was drawn using cluster sampling.
(b) This sample was drawn using stratified sampling.
(c) This sample was drawn using non-probability sampling.

1.5 The percentage of students in the Faculty of Social Science who are aware of the problem of environmental pollution is unknown. In order to estimate that percentage, a random sample of 200 students was selected from all 879 social science students; it turned out the 159 students are aware of the problem of environmental pollution. Therefore, we know that

(a) 79.5% is the estimate of the statistic.
(b) 20.5% is the estimate of the parameter.
(c) none of the above is correct.

QUESTION TWO. [9 + 6 + 3 + 2 marks]

Suppose that a researcher would like to investigate the literacy status of orphans aged below 16 years in the commercial city, using a probability sampling. The main purpose of the study is to estimate the proportion of orphans completed primary school. The researcher originally decided to select a random sample 100 orphans aged below 16 years using a simple random sample; but suddenly she changed her decision and opted to use a complex probability sampling. Therefore, the researcher chooses two townships using a simple random sampling from all existing townships as per the municipal council definition. From each of the two townships selected, she obtains a list of "blocks", a smaller unit in terms of geographical area. She uses again simple random sampling to select 10 blocks from each selected townships.

At block level, the researcher compiles, with the help of some local residences, a list of all orphans under sixteen years of age living in each of those selected blocks. She decided to select all orphans from each blocks. Based on the above facts, answer the following questions:

2.1 State the following for the above study:
(a) Population and its size.
(b) Name of the complex probability sampling method and its size.
(c) Parameter and Statistic.

2.2 State the sampling frame(s) used in the above survey in each stage of the survey.

2.3 State the main reason(s) for opting to use the complex sampling method instead of the simple random sample.

2.4 Suppose you are asked to do the same investigation, which sampling method will you choose? Explain your answer.

PART B: ANSWER ANY THREE QUESTIONS

QUESTION THREE. [10 + 10 marks]

3.1 State and discuss the important issues that need to cover when writing a research proposal.

3.2 Discuss how one can organise a review of the literature for writing a research proposal.

QUESTION FOUR. [10 + 10 marks]

4.1 State and discuss the nature and sources of problems.

4.2 Discuss how to evaluate the quality of internet materials.

QUESTION FIVE. [10 + 10 marks]

5.1 Compare probability sampling techniques over non-probability sampling techniques with respect to advantages and disadvantages.

5.2 Briefly discuss the different modes of data collection. At the end make a summary table for comparison of those modes you discussed.

QUESTION SIX. [20 marks]

Compare the following pairs of terms:

6.1 Statement of the Problem and Objective of the Study.
6.2 Conclusions of the Study and Recommendations of the Study.
6.3 Multi-stage Sampling and Cluster Sampling.
6.4 Simple Random Sampling and Accidental Sampling.
6.5 Experimental Research and Descriptive Research.