

7.2 There are six common weaknesses in research proposal. Discuss those weaknesses.

QUESTION FIVE.

[12 + 8 marks]

- 5.1 Discuss the purpose and the advantage of sampling. Do you agree that samples should be used only when it is impossible to obtain a complete list of a population? Justify your answer.
- 5.2 Discuss the different steps of conducting a multi-stage sampling in Manzini in order to obtain a sample of 100 unemployed young men aged 14-18 years.

QUESTION SIX.

[12 + 8 marks]

- 6.1 We have three modes of data collection. State and discuss these modes in terms of advantages and disadvantages.
- 6.2 Briefly, give an outline of procedures in questionnaire research.

QUESTION SEVEN.

[20 marks]

Compare the following pairs of terms:

- 7.1 Objectives of the Study and Hypotheses of the Study.
- 7.2 Results of the Study and Recommendations of the Study
- 7.3 Stratified Sampling and quota Sampling.
- 7.4 Probability Sampling and Non-Probability Sampling.
- 7.5 Research Report and Research Proposal.

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER 2009

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 ONE
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 drug company distributed free samples of its product to 250 000 physician, and approximately 108 000 of those physicians returned a postcard that entitled them to receive still more free samples. The company then surveyed 404 of those who had returned the postcard using a simple random sample and 65% of them said they recommended use of this brand of pain reliever. Applying this result, the company came up with a claim that the product was recommended by 65% physicians.

- (a) The claim is correct.
- (b) The claim is misleading.
- (c) Not sufficient information provided above to verify the claim whether it is correct or it is misleading.

1.2 To obtain a probability sample of the invoices over the past year, a clerk uses the computer to select all invoice numbers that are multiple of 13. If the invoice numbers are sequential, beginning with 1, what type of sample does this represent?

- (a) A simple random sample.
- (b) A systematic random sample.
- (c) A non-probability sample.

1.3 The age distribution of all students in the Faculty of Social Science is unknown. Suppose we are interested in finding the proportion of students over age 21. However, in a simple random sample of 200 students, it turned out the 120 were over the age of 21. Therefore, we know that

- (a) 60% is the value of the parameter.
- (b) 60% is the estimate of the statistic.
- (c) both (a) and (b) are wrong.

1.4 A researcher is studying the relationship between the two variables; the "faculty of students" and their "performance at the year-end examination". Assume that the first variable uses 1 for Science faculty, 2 for Agriculture faculty, 3 for Commerce faculty, etc. and performances are measured by the average marks of all the courses taken at the year-end examination. The researcher found a correlation coefficient of 0.92 between these two variables. With this result, the researcher concluded that

- (a) a positive relationship exists between these two variables.
- (b) the relationship between these two variables seems to be strong.
- (c) these two variables are not suitable for computing a correlation coefficient.

1.5 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 does not allow students to use their list of enrolled students in any academic year. Hence, you consulted two experts for the advice on how to select the samples. First expert suggested selecting 300 students using simple random sample and the second expert advised to draw 300 students at random without replacement. Which advice will you follow so that you can have better results?

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

QUESTION TWO.

[5 + 3 + 5 + 2 + 3 + 2 marks]

Suppose that a researcher would like to investigate on the attitudes of a rural population towards co-operative production. It is expected that attitudes will vary with sex and age of the participants. The age-sex composition of the rural population is as follows:

20 — 40	2 000	1 500	3 500
Over 40	2 500	2 000	4 500
Total	4 500	3 500	8 000

The researcher decided to select a random sample of 500 people. She compiled the list of all people living in that rural community along with their age and gender. She considers using, either, (a) a simple random sample or (b) a stratified random sample with proportional strata size. Based on the above facts, answer the following questions:

- 2.1 State the following for the above study:
 - (a) Population and its size.
 - (b) Sampling frame.
 - (c) Parameter and Statistic.
- 2.2 State the steps to draw a sample using the method (a). What would be value for n ?
- 2.3 State the steps to draw a sample using the method (b). What would be values for n_i ?
- 2.4 Which sampling method would you prefer in this case? Explain.
- 2.5 Suppose you are asked to do the same investigation using a third sampling method, which sampling method will you choose? Explain your answer.
- 2.6 Is the third method better than the method you preferred in 2.4? Justify your answer.

PART TWO
ANSWER ANY THREE QUESTIONS

QUESTION THREE.

[9 + 11 marks]

- 3.1 Discuss the main potential sources of research problem.
- 3.2 Suppose you are asked to submit a research proposal for your research project. Once a problem has been tentatively selected, you wish to evaluate the significance of the problem. Discuss the criteria used in the process of evaluating the significance.

QUESTION FOUR.

[8 + 12 marks]

- 4.1 Explain the importance of reviewing of the related literatures. Also discuss how one can organize the "Literature Review" chapter.
- 4.2 There are six common weaknesses in research proposal. Discuss those weaknesses.

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