

**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER 2009**

**TITLE OF PAPER : STATISTICAL DATA PROCESSING**

**COURSE CODE : ST206**

**TIME ALLOWED : 2 (TWO) HOURS**

**REQUIRMENTS : NONE**

**INSTRUCTIONS : ANSWER ANY 4 (FOUR) QUESTIONS.  
ALL QUESTIONS CARRY EQUAL MARKS.**

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

**QUESTION ONE.**

[ 5 + 5 + 5 + 10 marks ]

Consider the following examples:

- (a) Colors of automobiles in the faculty parking lot.
- (b) Classification of children in a day care centre ( infant, toddler, preschool ).
- (c) Pages in the telephone book for Swaziland.
- (d) Ranking of weight lifters.
- (e) Weights newborn infants at a certain hospital.

- 1.1 List the name of the variable you can extract from each of the above examples.
- 1.2 List some or all the possible values of the variable extracted from each of the examples.
- 1.3 State the measurement scale to use for those variables.
- 1.4 Prepare a Code-Book for the above 5 variables.

**QUESTION TWO.**

[ 5 + 12 + 8 marks ]

- 2.1 Define and explain the term "Data Processing" with an example.
- 2.2 Give an overview of data collection procedures in terms of advantages and disadvantages.
- 2.3 State the five types of information we usually collect when a questionnaire was used in the data collection process. Discuss with examples.

**QUESTION THREE.**

[ 13 + 12 marks ]

- 3.1 Define and compare Exploratory Data Analysis and Classical Data Analysis. Using different hypothetical scatter plots, discuss some of the insights of a data set which one can gain through the EDA approach.
- 3.2 State and explain, with examples, the main factors which affect how the data should be analysed after data collection.

**QUESTION FOUR.**

[ 9 + 16 marks ]

- 4.1 No matter how much care is taken there will always be some errors either in coding or in entering a set of codes on to the computer. Many of the problems in entering codes on to the computer are now being minimized by data entry checking procedures. Explain those procedures with examples.
- 4.2 Discuss how one can apply *multiple dichotomy method* and *multiple response method* while dealing with multiple responses to closed-ended questions.

**QUESTION FIVE.**

[ 25 marks ]

Discuss the following pairs of terms:

- 5.1 Descriptive and Inferential Statistics.
- 5.2 Mathematical Model and Measurement Model.
- 5.3 Coding and Codebook.
- 5.4 Univariate Analysis and Bivariate Analysis.
- 5.5 Adopting and Adapting in Data Collection Form.