

**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER 2007**

**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) Opinion on the quality of a movie expressed freely by a group of teenagers.
- (b) Degree classification of graduating students of the faculty of social science.
- (c) Brands of toothpaste.
- (d) Income of workers at a textile factory.
- (e) Amount of calcium deposit (in milligrams) in the organs of rats that have subjected to different experimental treatments.

- 1.1 List the name of the variable you can extract from each of the 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 The data processing commonly refers to converting verbal or written information into machine-readable data. Explain the above statement.
- 2.2 Discuss the different classification of data with examples.
- 2.3 Discuss the main reasons that encourage researchers to adopt items from other studies.

**QUESTION THREE.**

[ 12 + 13 marks ]

- 3.1 Define Exploratory Data Analysis and Classical Data Analysis? How does Exploratory Data Analysis differ from Classical Data Analysis? Discuss.
- 3.2 Using different hypothetical scatter plots, discuss some of the insights of a data set which one can gain through the EDA approach. Also explain the role of scatter plot in CDA approach.

**QUESTION FOUR.**

[ 15 + 10 marks ]

- 4.1 Once data have been collected they have to be analysed. State and explain the main factors which affect how the data are analysed.
- 4.2 Cross-tabulations are a way of displaying data so that we can fairly detect whether any association exists between the two variables. Explain this association in terms of strength, direction and nature of the relationship with hypothetical example of some cross-tables.

**QUESTION FIVE.**

[ 25 marks ]

Discuss the following pairs of terms:

- 5.1 Multiple Dichotomy Method and Multiple Response Method.
- 5.2 Modes of Data Collection and Methods of Data Analysis.
- 5.3 Descriptive and Inferential Statistics.
- 5.4 Logical and Filter checks.