UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER 2017

TITLE OF PAPER : STATISTICAL DATA PROCESSING

COURSE CODE : STA206/ST206

TIME ALLOWED : TWO (2) HOURS

INSTRUCTIONS : ANSWER ANY THREE QUESTIONS.

Question 1

Compare and contrast the following concepts that hinge on data processing;

a) Consistency vs. Accuracy

(10 Marks)

b) Systematic vs. Random Errors

(10 Marks)

Question 2

A major travel company operates a number of call centres in the country to support its holiday booking activities. The company would like its call operators to gather quantitative information from callers who have just purchased a holiday, to establish their satisfaction with the service they have received. This is to be done at the end of the call. The travel company has engaged your research agency to advise them.

a) Outline the strengths and limitations of the approach the company wishes to take. Give reasons for the points you make.

(10 Marks)

b) The company has instructed operators to ask each customer a set of structured questions about their level of satisfaction with the telephone booking service they have just used. You have been asked to provide advice for the design of these questions. Outline the information which should be included in this advice, giving reasons for the suggestions you make.

(10 Marks)

Question 3

You have been asked to run an introductory seminar on data editing for new recruits to the quantitative team in your organisation. The training manager is keen to ensure that the recruits understand the importance of effective data editing for data which has been gathered by either paper-and-pen and or computer-based methods.

a) What is 'data editing' and how can it be carried out effectively? Describe the data editing process, illustrating your answer with examples.

(15 Marks)

b) You need to ensure that the new recruits can deal effectively with 'missing data'. Explain what is meant by the term 'missing data', how it occurs and how it can be dealt with. Illustrate your answer with examples.

(5 Marks)

Question 4

The Central Statistical Office(CSO) carries out Swaziland Household Income and Expenditure Surveys every five years. The last survey was carried out in 2015, and the next survey will be done in 2020. Advise the Data Processing Unit at CSO on issues of the data file types, format, and structure(s) for the 2015 survey.

(20 Marks)

Question 5

a) Compare and contrast a coding scheme and code book.

(8 Marks)

b) In APPENDIX A, you will find a section of the household questionnaire used for the 2010 Swaziland Multiple Indicator Cluster Survey (MICS). Design a code book(coding manual) based on this questionnaire.

(12 Marks)

HH19.
Record the time:

Hour........................ ___ ___

Minutes........................ ___ ___

HOUSEHOLD LISTING FORM HL

FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES HERE. STARTING WITH THE HEAD OF THE HOUSEHOLD
List the head of the household in line 01. List all household members (HL2), their relationship to the household head (HL3), and their sex (HL4)

Then ask: ARE THERE ANY OTHERS WHO LIVE HERE, EVEN IF THEY ARE NOT AT HOME NOW?
If yes, complete listing for questions HL2-HL4. Then, ask questions starting with HL5 for each person at a time
Use an additional questionnaire if all rows in the household listing form have been used.

								For women age 15-49	For men age 15-59	For children age 5-14	For children under age 5	If age 18-59 years	For all house-hold members	For children age 0-17 years					

HL1. Line #	HL2. Name	HL3. WHAT IS THE RELATION-SHIP OF (name) TO THE HEAD OF HOUSE-HOLD?	HL4. IS (name) MALE OR FEMALE?	HL5. WHAT IS (name's) DATE OF BIRTH?		HL6. HOW OLD IS (name)? Record in completed years. If age is 95 or above, record 95	HL7. Circle line number if woman is age 15-49	HL7A. Circle Line number If man Is age 15-59	HL8 WHO IS THE MOTHER OR PRIMARY CARE-TAKER OF THIS CHILD? Record line number of mother/caretaker	HL9 WHO IS THE MOTHER OR PRIMARY CARE-TAKER OF THIS CHILD? Record line number of mother/caretaker	HL9A HAS (name) BEEN VERY SICK FOR AT LEAST 3 MONTHS DURING THE PAST 12 MONTHS?	HL10 DID (name) STAY HERE LAST NIGHT? 1 Yes 2 No	HL11 IS (name's) NATURAL MOTHER ALIVE? 1 Yes 2 No→HL13 8 DK→HL13	HL12 (name's) NATURAL MOTHER LIVE IN THIS HOUSE-HOLD? Record line number of mother or 00 for 'no'	HL12A If mother does not live in house-hold HAS (name's) MOTHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS?	HL13 Is (name's) NATURAL FATHER ALIVE? 1 Yes 2 No→Next Line 8 DK→Next Line	HL14 DOES (name's) NATURAL FATHER LIVE IN THIS HOUSE-HOLD? Record line number of father or 00 for 'no'	HL14A If father does not live in house-hold HAS (name's) FATHER BEEN VERY SICK FOR AT LEAST 3 MONTHS IN THE PAST 12 MONTHS?
			1 Male 2 Female	98 DK	9998 DK							1 Yes 2 No						
Line	Name	Relation*	M F	Month	Year	Age	15-49	15-59	Mother	Mother	Y N DK	Y N	Y N DK	Mother	Y N DK	Y N DK	Father	Y N DK
01		0 1	1 2	___	___ ___	___ ___	01	01	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
02		___ ___	1 2	___	___ ___	___ ___	02	02	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
03		___ ___	1 2	___	___ ___	___ ___	03	03	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
04		___ ___	1 2	___	___ ___	___ ___	04	04	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
05		___ ___	1 2	___	___ ___	___ ___	05	05	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
06		___ ___	1 2	___	___ ___	___ ___	06	06	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
07		___ ___	1 2	___	___ ___	___ ___	07	07	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
08		___ ___	1 2	___	___ ___	___ ___	08	08	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
09		___ ___	1 2	___	___ ___	___ ___	09	09	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8
10		___ ___	1 2	___	___ ___	___ ___	10	10	___ ___	___ ___	1 2 8	1 2	1 2 8	___ ___	1 2 8	1 2 8	___ ___	1 2 8