



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

CITY CAMPUS

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF ARTS

KPS 813: APPLIED RESEARCH TECHNIQUES IN CRIME

DATE: Wednesday, 31st January 2018

TIME: 5.30 p.m. - 8.30 p.m.

INSTRUCTIONS:

ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS. CLEARLY SHOW YOUR WORKINGS.

1. a) The table below contains part of the data collected from a sample of 10 victims in a study designed to investigate the victim - offender relationship and the type of crime committed and whether or not the cases were prosecuted. Study it and answer the questions that follow:

Victim-Offender Relationship and Type of Crime

ID	Age of Victim	Victim-Offender relationship	No. of years spent in school	Was case prosecuted	Type of Crime
1	23	Stranger	15	Yes	Rape/sexual assault
2	22	Stranger	18	Yes	Robbery
3	10	Non-Stranger	12	No	Robbery
4	27	Stranger	12	Yes	Assault
5	25	Non-Stranger	10	No	Assault
6	22	Non-Stranger	14	No	Rape/Sexual assault
7	23	Non-Stranger	-	No	Rape/Sexual assault
8	22	Stranger	13	Yes	Assault

INVOLVEMENT IN ANY EXAMINATION IRREGULARITY SHALL LEAD TO DISCONTINUATION

9	26	Non-Stranger	16	No	Assault
10	125	Non-Stranger	13	No	Rape/Sexual assault

- i) Identify the nominal and ordinal variables in the data and then code them. (5 Marks)
- ii) Identify any 2 errors in the data and describe how each one of them can be corrected. (6 Marks)
- iii) State at least two descriptive statistics and two charts which can be used to summarize the variable "number of years spent in school". (4 Marks)
- iv) State and briefly describe one inferential statistic a researcher could have used to analyze the variable 'was the case prosecuted?' (3 Marks)
- v) Describe the model characteristics of the variable "age". (2 Marks)
- vi) Cross-tabulate the variables: Victim-offender relationship and type of crime and then explain the results. (10 Marks)

2. Following recent invasion of University of Nairobi halls of residence by the Kenyan Police who lobbed tear gas canisters at the hapless students, a study was carried out to establish whether or not there is a relationship between the number of tear gas canisters thrown at the students and the quantity of water used by the students to neutralize the effects of the tear gas. Study it and answer the questions that follow.

Number of tear gas canisters (x_i)	Litres of water used (y_i)
8	2.1
12	2.5
14	4.0
10	3.6

- i) Determine the covariance. (14 Marks)
- ii) Determine and interpret the correlation coefficient. (6 Marks)

3. Study the data set and answer the questions that follow.

1806 1717 1974 1791 1682 1910 1838

- i) Calculate the variance. (14 Marks)

- ii) Calculate the standard deviation and determine how many towns have the number of officers beyond one standard deviation. (4 Marks)
- iii) Determine the Coefficient of Variation. (2 Marks)
4. a) Define outliers and give any two sources of outliers in a data set. (3 Marks)
- b) Assume that the government of Kenya wants to establish whether or not there is a relationship between the unemployment levels and crime rates in the country. Discuss any THREE qualitative research methods you may engage in order to collect the required information. (17 Marks)

5. On September 1, 2017 the Supreme Court judges annulled the results of the presidential elections held on August 8. Immediately following the judgement, Kenya's current president displayed raw anger towards the head of the said court. The statement that ***"The President erred in showing disrespect for the courts"*** was posed to members of the public randomly picked from Nyeri county. The responses from those sampled are provided below:

Strongly Agree	Strongly Disagree	Strongly Agree
Disagree	Agree	Agree
Strongly Agree	Strongly agree	Strongly disagree
Strongly Disagree	Very Strongly Agree	Agree
Strongly Agree	Agree	Strongly Agree
Agree	Strongly Agree	Agree
Strongly Disagree	Strongly Agree	Disagree
Strongly Agree	Disagree	Strongly agree

Using three relevant tabular and two graphical methods analyze and present the data above. (20 Marks)