(Knowledge for Development)

KIBABII UNIVERSITY (KIBU)

UNIVERSITY EXAMINATIONS 2021/2022 ACADEMIC YEAR MAIN

SECOND YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DIPLOMA IN CRIMINOLOGY & SOCIAL WORK

COURSE CODE: DCR 064

COURSE TITLE: SOCIAL STATISTICS

DATE: 28TH/01/2022 **TIME: 9AM-11AM**

INSTRUCTIONS TO CANDIDATES

Answer question one (compulsory) and any other two questions

TIME: 2 Hours

KIBU observes ZERO tolerance to examination cheating

QUESTION ONE

a) Discuss any four data collection methods (8 marks)
b) State any four ways in which social statistics is abused. (4 marks)
c) Give any two reasons why range is not a good measure of variation (2 marks)
d) Differentiate between a discrete and a continuous variable (2 marks)
e) Define the following terms (8 marks)
   i) Arithmetic mean
   ii) Mode
   iii) Hypothesis testing
   iv) Frequency distribution
f) Ochieng would like to know the average amount of money police officers carried on a particular day. From a sample of his closest friends, he has collected the following data;
   250,2000,4000,650,2000,1050,90,8000,1500,264. What is the mean pocket money (3 marks)
g) Which of these two sets of data has greater variability (3 marks)

A	B
Mean=150kgs	Mean=0.85cm
Standard deviation= 30.5kg	Standard deviation=0.015cm

QUESTION TWO

a) Discuss the two categories of sampling plans (6 marks)
b) Evaluate the mean, variance and standard deviation of the following distribution

x	5-7	8-10	11-13	14-16	17-19	20-22	23-25
f	2	4	8	7	5	3	1

(14 marks)

QUESTION THREE

a) Discuss any three properties of a normal distribution (6 marks)
b) In a class of 100 pupils, the mean of a test is 15 and S=2.5, assuming that the scores are normally distributed.
   i. How many pupils scores lie between 12.5 and 17.5? (4 marks)
   ii. How many pupils scored above 20? (3 marks)
   iii. How many pupils scored between 16 and 18? (4 marks)
   iv. Suppose 95% of the top scorers are to be selected, what is the maximum score one has to obtain in order to be selected? (3 marks)

QUESTION FOUR

a) Distinguish between (8 marks)
   i. Mode and median
   ii. Bar graph and Histogram
   iii. A parameter and a statistic
b) Discuss the four levels of measurement in social statistics (12 marks)