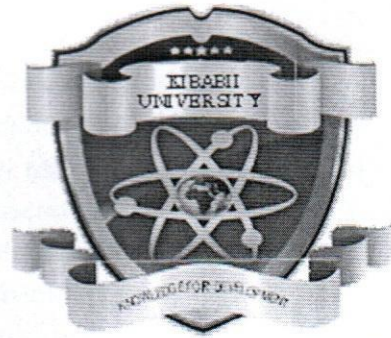


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KIBABII UNIVERSITY

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

SECOND YEAR

MAIN EXAMINATIONS

FOR THE DIPLOMA

IN

CRIMINOLOGY & CRIMINAL JUSTICE

COURSE CODE: DCR 064

COURSE TITLE: SOCIAL STATISTICS.

DATE: 31ST AUGUST 2022

TIME: 9AM-11AM

INSTRUCTIONS TO CANDIDATES

Answer question one (compulsory) and any other two questions

TIME: 2 Hours

Kibabii University observes ZERO tolerance to examination cheating

QUESTION ONE

- a) Discuss any four data collection methods (8 marks)
- b) Briefly describe the two branches of statistics (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) In a sample of 200 people where a particular device was selected. 100 were given a drug and the others were not given any drug. Discuss any four reasons behind sampling. (8 marks)
- f) Ochieng would like to know the average amount of money students 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. Which comment can you make about the given value of s ? (4 marks)
- ii. Why is the assumption necessary? (3 marks)
- c) State the seven steps used in hypothesis testing (7 marks)

QUESTION FOUR

- a) Distinguish between (8 marks)
- i. Quartiles and percentiles
- ii. Primary data and Secondary data
- iii. A parameter and a statistic
- b) Discuss any three ways of graphical representation of data (12 marks)

QUESTION FIVE

The following data was obtained from the heights in centimeters of students.

168,142,171,153,155,173,164,148,159,161,172,149,171,168,155,173,164,149,161,142,148,
164,159,164,173,164,152,153,164,155,148,164.

- a) Prepare a grouped frequency distribution table for this data using class size 5 starting with the class 142-146 (3 marks)
- b) Use the data to draw a graph of cumulative frequency and use it to estimate the median of the distribution. (7 marks)
- c) Use the data to calculate (10 marks)
 - i) The mode
 - ii) The 4th percentile
 - iii) The mean absolute deviation