(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2019/2020ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER

MAIN EXAMS

FOR THE DEGREE OF BACHELOR OF COMMERCE

COURSE CODE: BCO 212

COURSE TITLE: BUSINESS STATISTICS

DATE:16TH NOVEMBER 2020 **TIME**: 2.00PM-4.00PM

INSTRUCTIONS TO CANDIDATES
Answer Question One in Section A and Any other TWO (2) Questions in Section B

TIME: 2 Hours

KIBU observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

SECTION A

QUESTION ONE (COMPULSORY)

a) Ten students scored the following marks. Calculate the mean and standard deviation of the following values.

  43,75,48,51,51,47,50,47,40,48   6 marks

b) Using the above data determine

  i) Pearson's measure of skewness.   4 marks

  ii) Comment   on the answer in (i) above   2 marks

  iii) Determine the median   2 marks

c) The data below relates to advertizing expenditure by a number of companies in the market.

Expenditure	number of companies
Less than 500	210
500 – 1000	184
1000 - 1500	232
1500 – 2000	348
2000 – 2500	177
2500 - 3000	83
3000 - 3500	48
3500 - 4000	12
4000 and above	9

Draw the cumulative frequency curve (Ogive).   11 marks

d) Explain the difference between

i) discrete and continuous data

ii) primary and secondary data   5 marks

SECTION B

QUESTION TWO

The following data relate to a set of commodities used in a particular process. Calculate
Laspeyres and Paasche price indices for period 1.   10 marks

Commodity	unit of purchase	BASE PERIOD Price Sh. 000	BASE PERIOD Quantity (Units)	PERIOD 1 Price sh.000	PERIOD 1 Quantity (units)
A	2 gallon drum	3.6	100	4.0	96
B	1Tonne	8.0	12	9.0	10
C	10 pounds	4.5	16	4.1	18
D	100 metres	0 .5	1100	6.0	1200

b) Explain uses and limitations of index numbers.   10 marks

QUESTION THREE

a) From past records , the probability that a machine will need correcting adjustments
during a day's production run is 0.3.If there are 8 machines running on a particular
day, find the probability that:

i)   No machines need correcting   2.5 marks
ii)   Just one machine needs correcting   2.5 marks
iii)   Exactly two machines need correcting   2.5 marks
iv)   More than two machines need correcting   2.5 marks

b) Explain five reasons why the mean is a popular measure in statistics   10 marks.

QUESTION FOUR

a) Explain the merit of using sampling as an approach in studying a population.
   In your explanation point the also the weakness of using a census.

b) The management of an engineering firm with ten operating plants of similar
    size producing small components has observed the following pattern of
    expenditure on inspection and defective parts delivered to the customers.

Inspection expenditure Per 1000 units	defective parts per 1000 units
25	50
30	35
15	60
75	15
40	46
65	20
45	28
24	45
35	42
70	22

i) Calculate the correlation coefficient to show the management the relationship between expenditure on inspection and defective parts delivered.   12 marks

ii) Advice the management.   2 marks