CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DIPLOMA IN BUSINESS MANAGEMENT

DIBM 0223: BUSINESS STATISTICS

STREAMS: DIBM **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 11/4/2018 **11.30 A.M. – 1.30 P.M.**

INSTRUCTION: Answer question ONE and any other TWO questions

QUESTION ONE

(a) Discuss the following basic concepts of statistics

(i) Population [2 marks]

(ii) Variable [2 marks]

(iii) Sample [2 marks]

(iv) Statistics [2 marks]

(b) Distinguish between primary data and secondary data. [2 marks]

(c) The following data sets relate to the number of vehicles booked by passengers for 30 days.

20	14	21	29	43	17	15	26	8	14
39	23	16	46	28	11	26	35	26	28
30	22	23	7	32	19	22	18	27	9

Required:

(i) Plot a stem and leaf display to represent the above data. [5 marks]

(ii)

(iii) Create a frequency distribution for the above data. [3 marks]

(d) Consider the data below:

Faculties	Male	Female
Arts	100	50
Business	60	40
Science	150	200
Agriculture	80	20
Engineering	100	100
Humanities	150	150

Required:

Represent the above information in a multiple bar chart. [5 marks]

(e) Explain the importance of statistics in business. [7 marks]

QUESTION TWO

(a) Consider the data below:

Class interval	Frequency
20 – 39	3
40 – 59	8
60 – 79	10
80 – 99	5
100 – 119	4
120 – 139	4
140 – 159	6

Evaluate:

(i) Mean [2 marks]
(ii) Median [3 marks]
(iii) Mode [2 marks]
(iv) Quartile deviation [3 marks]
(v) Mean average deviation [3 marks]
(vi) Variance [3 marks]

(b) State four properties of a good measure of dispersion. [4 marks]

QUESTION THREE

(a) State two types of correlation analysis. [2 marks]

(b) Consider the number of hours 10 students studied for an exam and the marks each student obtained.

Hours	Marks
8	56
5	44
11	77
13	72
10	70
5	54
18	94
15	85
2	33
8	65

Calculate the spearman's rank correlation and interpret your answer. [6 marks]

(c) (i) The following information relate to prices and their corresponding quantities in the consecutive years:

	2016		2017	
Item	Price	Units	Price	Units
A	36	100	40	95
B	80	12	90	10
C	45	16	41	18
D	5	1100	6	1200

Required:

Calculate the Laspeyer's and Paasche's index. [6 marks]

(ii) State any three uses of index numbers. [3 marks]

(d) State any three properties of measures of central tendency.[3 marks]

QUESTION FOUR

(a) You are provided with the information below:

Class boundary	Frequency
14.5 – 19.5	8
19.5 – 24.5	10
24.5 – 29.5	12
29.5 – 34.5	17
34.5 – 39.5	9
39.5 – 44.5	5
44.5 – 49.5	3

Required:

Plot a histogram and a frequency polygon using the above information.

[8 marks]

(b) State any four advantages of graphical representation as a way of data presentation.

[4 marks]

(c) Consider the data below:

x	y
10	5
14	3
7	5
12	2
5	7
6	8

Calculate the Pearson product moment correlation and interpret your answer.[8 marks]
