DIBM 0223

CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

CHUKA & EMBU

**SECOND YEAR EXAMINATION FOR THE AWARD OF DIPLOMA
IN BUSINESS MANAGEMENT AND ACCOUNTING**

DIBM 0223: BUSINESS STATISTICS

STREAMS: DIBM (Y2S1)   **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 07/8/2019   **8.30 A.M. – 10.30 A.M.**

INSTRUCTIONS:
- **Answer question ONE and any other TWO**
- **Do not write anything on the question paper**
- **Relevant tables are provided**

QUESTION ONE

(a)   Explain four uses of statistics in a business   [4 marks]

(b)   Giving examples explain two sources of data   [2 marks]

(c)   You have conducted a market survey with a sample space of 50 regarding the

acceptability of a new product which your company has launched. The scores of the

respondents on the appropriate scale are as given in the table below:

40	45	41	45	45	30	39	8	48	25
26	9	23	24	26	29	8	40	41	42
39	35	18	25	35	40	42	43	44	36
27	32	28	27	25	26	38	47	36	35
32	28	40	41	43	44	45	40	39	41

Required:

(i)   Prepare a frequency table   [6 marks]

(ii)   Present the same information as a histogram.   [6 marks]

(iii)   The following data gives the pattern of overtime in hours worked per week by 100 employees of a company

Overtime hours	10-15	15-20	20-25	25-30	30-35	35-40
No. of employees	11	20	20	35	8	6

Required: Calculate

(i)   Median   [4 marks]

(ii)   Simple average   [4 marks]

(iii) Q_1 [4 marks]

(iv) P_{80} [4 marks]

QUESTIONTWO

(a)   Explain five functions of index numbers in an economy   [5 marks]

(b)   Given the following data relating to 2017 and 2018, calculate the indices using the following:

(i)   Pasche method   [3 marks]

(ii)   Fisher's Ideal method   [3 marks]

(iii)   Laspeyre's method   [3 marks]

	2017		2018	
Item	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

(c)   Explain assumptions of regression analysis   [6 marks]

QUESTION THREE

(a)   Explain 3 differences between correlation and regression analysis   [6 marks]

(b)   In a certain firm, the human resource department introduces attest for job applicants to predict their production rating. A sample of 10 applicants is selected. They are given tests and then assigned a production rating. Results are shown in the table below:

Worker	1	2	3	4	5	6	7	8	9	10
Test score	53	36	88	84	86	64	45	48	39	69
Production rating	45	43	89	79	84	66	49	48	43	76

Required:

Fit a linear regression equation using method of least squares.   [10 marks]

(c)   Explain assumptions of normal distribution.   [4 marks]

QUESTION FOUR

(a)   Explain FOUR types of correlation   [2 marks]

(b)   The following data gives the age and performance of 10 firm listed in the NSE

Age	56	42	36	47	49	42	60	72	63	55
Profits (ksh M)	147	125	118	128	145	140	155	160	149	150

Required:

(i)   Find the correlation coefficient between X and Y   [8 marks]

(ii)   Explain the meaning of your results in (i)   [2 marks]

(c)   Explain important steps a researcher must follow during data collection for statistical analysis   [8 marks]