

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DIPLOMA IN
BUSINESS MANAGEMENT

DIBM 0223: BUSINESS STATISTICS

STREAMS: DIBM (Y2S1)

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 15/04/2020

8.30 A.M. – 10.30 A.M.

INSTRUCTIONS:

- Answer question ONE and any other TWO questions
- Mathematical tables are provided

QUESTION ONE

- (a) Explain relevance of statistics in business [6 marks]
- (b) Discuss various sources of data. Give examples in each case [4 marks]
- (c) The following data relate to price of a litre of petrol in various petrol stations in Tharaka Nithi County

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 starting from 5 – 10 [8 marks]
- (ii) Present the same information as a histogram [6 marks]
- (d) Explain six functions of index numbers in an economy [6 marks]

QUESTION TWO

- (a) Discuss four types of correlation [4 marks]
- (b) The following data relate to the number 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:

- (i) Compute the mean [4 marks]
- (ii) Work out the median [4 marks]
- (iii) Q_2 [2 marks]
- (iv) P_{50} [4 marks]

QUESTION THREE

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

Applicant	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:

- (i) Fit a linear regression line using a method of least squares [10 marks]
- (ii) Interpret your results [2 marks]
- (iii) Explain steps a researcher must follow during collection of data for statistical analysis [8 marks]

QUESTION FOUR

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- (a) Discuss assumptions of nominal distribution [4 marks]
- (b) The following data relates to prices of commonly in year 2018 and 2019

Item	2018		2019	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

Required:

Determine the following indices. Interpret their results

- (i) Paasche index [3 marks]
 - (ii) Laspeyres index [3 marks]
 - (iii) Dorbish index [3 marks]
- (c) The following data give the capital and firms performance for firms listed in NSE

Capital	56	42	36	47	49	42	60	72	63	55
Profits (kshs m)	147	125	118	128	145	140	155	160	149	150

Required:

- (i) Find correlation coefficient between capital and profit generated by the firms [6 marks]
 - (ii) Interpret the results [1 mark]
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