

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DIPLOMA IN BUSINESS MANAGEMENT AND ACCOUNTING

DIBM 0223: BUSINESS STATISTICS

STREAMS: Y2S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 4/12/2019

2.30 P.M – 4.30 P.M

INSTRUCTIONS

Answer question one and any other two questions

Do not write anything on the question paper

Relevant tables are provided

QUESTION ONE

- (a) Explain five uses of statistics in business. [5 marks]
- (b) Discuss two main sources of statistical data. Give examples in each case. [4 marks]
- (c) Highlight factors a research should consider when designing a questionnaire as a tool of data collection. [7 marks]
- (d) The data provided below show the prices of a litre of mineral water collected from shops in Chuka town.

34	38	31	31	37	43	38	37	32	40
41	34	37	36	32	38	41	35	37	38
35	37	32	40	39	31	33	37	37	43
34	35	38	41	37	38	38	41	43	30
32	36	32	35	38	34	38	37	34	36

Required :

- (i) Present the above data using an appropriate frequency distribution. [6 marks]
- (ii) Using the same information calculate;
- (a) Arithmetic mean [2 marks]
- (b) Median [2 marks]
- (c) Mode [2 marks]
- (d) Q2 [2 marks]

QUESTION TWO

- (a) Explain three roles of regression analysis in business. [3 marks]
- (b) Explain assumptions of normal distribution. [5 marks]
- (c) You are given the following information about prices of various commodities in Ndagani market for the year 2017 and 2018.

2017			2018		
Commodity	Price	Quantity	Commodity	Price	Quantity
Eggs	2	8	Eggs	4	6
Hoho	5	10	Hoho	6	5
Onions	4	14	Onions	5	10
Tomatoes	2	19	Tomatoes	2	13

Required :

Construct index numbers of price using the following methods . Also interpret their results.

- (a) Laspeyres method [3 marks]
- (b) Paasches method [3 marks]
- (c) Fisher’s method [3 marks]
- (d) Bowleys method [3 marks]

QUESTION THREE

- (a) The following data relates to age and financial performance of 10 firms listed in NSE

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

Required :

- (i) Determine the correlation coefficient between age and profits of firm. [8 marks]
- (ii) Interpret results obtains in (i) above . [2 marks]
- (iii) Discuss importance of index numbers to a firm. [6 marks]
- (iv) Discuss four types of correlation. [4 marks]

QUESTION FOUR

- (a) The human resource management team of a certain firm have devised a model to test job applicants to predict their performance in the productive department . 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 :

- (i) Fit a linear regression equation using method of least squares. [10 marks]
- (ii) Interpret your regression equation. [2 marks]
- (b) Explain the following terms as commonly used in statistics. Give examples ;
- (i) Population [2 marks]
- (ii) Parameter [2 marks]
- (iii) Variable [2 marks]
- (iv) Statistics [2 marks]
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