

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATIONS FOR THE AWARD OF DIPLOMA IN BUSINESS MANAGEMENT

DIBM 0223: BUSINESS STATISTICS

STREAMS: DIBM

TIME: 3 HOURS

DAY/DATE: WEDNESDAY 08/8/2018

8.30 A.M. – 10.30 A.M.

**INSTRUCTIONS:** Answer question ONE and any other TWO questions

**QUESTION ONE**

- (a) Discuss the importance of statistics in business [5 marks]
- (b) Explain the following terms as used in statistics
- (i) Descriptive statistics
  - (ii) Qualitative variable
  - (iii) Parameter
  - (iv) Secondary data [6 marks]
- (c) The following data set results to the number of vehicles booked by passengers for 50 days
- 48, 22, 12, 33, 53, 44, 51, 57, 61, 46, 72, 83, 15, 24, 36, 23, 42, 53, 63, 75, 85, 43, 17, 26, 48, 28, 38, 38, 42, 55, 44, 65, 56, 76, 33, 37, 54, 38, 41, 45, 66, 68, 78, 55, 35, 39, 45, 51, 52, 66

**Required:** create a grouped frequency distribution starting with 11 – 20 class using inclusive method [2 marks]

- (i) Prepare a histogram and frequency polygon using the above data [6 marks]
  - (ii) Plot a stem and leaf to represent the above data [6 marks]
- (d) State three properties of a good measure of dispersion [3 marks]

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- (e) The following data set relates to the number of classrooms 20, 17, 25, 30, 28, 10, 36, 19, 40, 52

**Required:**

Calculate the moving average order of three [5 marks]

**QUESTION TWO**

- (a) With the aid of a diagram describe the components of time series [6 marks]  
(b) After an exam students performed as explained below

Marks	Number of students
11 – 20	3
21 – 30	5
31 – 40	8
41 – 50	11
51 – 60	10
61 – 70	7
71 – 80	4
81 – 90	2

**Required:**

Mean, median, mode, quartile deviation, mean average deviation and standard deviation [12 marks]

- (c) State any two properties of measures of central tendency [2 marks]

**QUESTION THREE**

- (a) Discuss the steps involved in data collection [6 marks]  
(b) You are given the following information about the prices of various commodities in Chuka market for two consecutive years

	2016		2017	
	Price	Quantity	Price	Quantity
A	20	80	30	60
B	50	150	10	50
C	40	120	14	100
D	15	200	16	130

**Required:**

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Laspeyer's, Paasche's and fishers index and interpret the meaning [10 marks]

(c) Differentiate between class mark and class boundary [2 marks]

(d) Define the term statistics [2 marks]

**QUESTION FOUR**

(a) Highlight the uses of index numbers [2 marks]

(b) Explain the steps involved in forecasting [6marks]

(c) The following information relates to ABC limited

Months	X	Y
January	15	200
February	22	250
March	18	180
April	10	220
May	8	150
June	12	250
July	25	400
August	30	350

**Required:**

(i) The regression function [10 marks]

(ii) In December the company expects to produce 80 units of X. estimate the value of Y [2 marks]