

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

CHUKA AND EMBU CAMPUSES

EXAMINATION FOR THE AWARD OF DIPLOMA IN BUSINESS MANAGEMENT

DIBM 0223: BUSINESS STATISTICS

STREAMS: DIBM Y2S1

TIME: 2 HOURS

DAY/DATE: TUESDAY 04/12/2018

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- Answer question ONE and any other TWO questions.

Question one

- (a) Explain the following terms as used in statistics
- (i) Variable
 - (ii) Population
 - (iii) Sample (6 marks)
- (b) Discuss the role of statistics in business. (4 marks)

The following data set relates to the number of cars

20, 14, 21, 29, 43, 17, 15, 26, 8, 14
39, 23, 15, 46, 28, 12, 26, 34, 26, 28
30, 22, 23, 7, 32, 19, 22, 18, 27, 7
11, 27, 33, 48, 52, 55, 59, 50, 52, 45

Required:

- (i) Create a grouped frequency distribution starting with 0-9 class using inclusive method. (3 marks)
- (ii) Prepare a histogram and frequency polygon of the above data. (4 marks)
- (iii) Plot a stem and leaf to represent the above information. (7 marks)

- (c) A random variable is normally distributed with mean of 50 and standard deviation of 10. Compute
- (i) Probability of x is greater or equal to 45. (2 marks)
 - (ii) Probability that x is less or equal to 62. (2 marks)
 - (iii) Probability that x is greater than 43 but less than 62. (2 marks)

QUESTION TWO

- (a) The following were the scores of 100 students in a class

Scores	Number of students
11-20	8
21-30	10
31-40	13
41-50	18
51-60	15
61-70	12
71-80	9
81-90	7
91-100	5

Required: mean, mode, median, 7th decile, quartile deviation. (15 marks)

- (b) State the properties of a good measure of dispersion. (3 marks)
- (c) Distinguish between inferential and descriptive statistics. (2 marks)

QUESTION THREE

- (a) Differentiate between binomial distribution and Poisson distribution. (3 marks)
- (b) The following information relates to the quantity and prices of commodities for two years.

	2015		2016	
	Price	Quantity	Price	Quantity
W	50	150	15	80
X	30	80	25	120
Y	40	120	18	90
Z	20	60	35	100

Required: Laspeyer's, Paascher's and fishers index and interpret its meaning. (10 marks)

- (c) Discuss the methods of data collection. (4 marks)
- (d) State the advantages of a stem and leafy display. (3 marks)

QUESTION FOUR

- (a) The following information relates to XYZ limited

X	Y
10	15
20	25
30	40
40	45
50	60
60	70
70	80
80	100

Required:

- (i) Determine the line of best fit using regression analysis. (8 marks)
 - (ii) The correlation coefficient using Pearson product moment. (8 marks)
 - (b) Explain the tabular method of data presentation. (2 marks)
 - (c) State two importance of index numbers as used in statistics. (2 marks)
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