

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF COMMERCE, BACHELOR OF PURCHASING & LOGISTICS
MANAGEMENT

BCOM 262: BUSINESS STATISTICS

STREAMS: BCOM & BPLM (Y2S1)

DAY/DATE: FRIDAY 09/7/2021

TIME: 2 HOURS

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS: Answer question ONE and any other TWO

QUESTION ONE

- (a) Discuss relevance of statistics for a firm [5 marks]
- (b) The following data represent consumption pattern of milk in a week by various families

Packets of milk consumed	No. of families
11 – 20	3
21 – 30	5
31 – 40	8
41 – 50	11
50 – 60	10
61 – 70	7
71 – 80	4
81 – 90	2

Required:

- (i) Prepare a histogram and frequency polygon to show the family consumption of the product [8 marks]
- (ii) Calculate the:

BCOM 262

- (a) Median [2 marks]
(b) Mode [2 marks]
(c) Mean [2 marks]
- (c) Explain 3 types of correlation [3 marks]
- (d) The following data relates to the number of days it takes for a tender evaluation in a certain institution
30, 30, 31, 32, 35, 34

Required:

- Prepare a stem leaf diagram to represent the data [6 marks]
- (e) Explain two assumptions of regression analysis [2 marks]

QUESTION TWO

- (a) Explain four importance of index numbers in a business [4 marks]
- (b) Ranks of two artists in a musical contest by judges are as given below. The two numbers in brackets denote the ranks of the same artists A and B respectively
(1, 10) (2, 7) (3, 2) (4, 6) (5, 4) (6, 8) (7, 3) (8, 1) (9, 11) (10, 15) (11, 5) (13, 14) (14, 12) (15, 13)

Required:

- (i) Find the rank correlation coefficient [8 marks]
(ii) Interpret the results [3 marks]
- (c) Explain five properties of normal distribution [5 marks]

QUESTION THREE

- (a) You are given the following data about prices of various commodities in Chogoria town for year 2019 and 2020

	Price	Quantity	Price	Quantity
Eggs	2	8	4	6
Hot dog	5	10	6	5
Onions	4	14	5	10
Tomatoes	2	19	2	13

BCOM 262

Required: Construct index numbers using the following methods and interpret results in each case

- (i) Laspeyre's method [2 marks]
- (ii) Paasche's method [2 marks]
- (iii) Fishers method [2 marks]
- (c) Discuss differences between regression analysis and correlation analysis [4 marks]
- (d) Fit a strength line trend by method of least square to the following data about production of sugar in Mumias Sugar Company

Year	2014	2015	2016	2017	2018	2019	2020
Prod (Tonnes)	12	10	14	11	13	15	16

Required: Calculate the trend values and estimate the likely production for the year 2021 [6 marks]

QUESTION FOUR

- (a) Explain the relevance of forecasting in business [4 marks]
- (b) Explain five properties of normal distribution [5 marks]
- (c) A company gives on job training of its sales men and women which is followed by a test H is considering whether it should terminate the services of any sales person who does not do well in the test. The following data gives the test scores by nine officers during the last one year

Test scores	14	19	24	21	26	22	15	20	19
Sales (ksh '000'	31	36	48	37	50	45	33	41	39

Required:

Compute the coefficient of correlation between test scores and sales made by the sales officers [10 marks]
