UNIVERSITY EXAMINATION

CHUKA   UNIVERSITY

RESIT/SPECIAL EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF COMMERCE

BCOM 262: BUSINESS STATISTICS

STREAMS: **TIME: 2 HOURS**

DAY/DATE: MONDAY 03/05/2021   **11.30 A.M – 1.30 P.M**

INSTRUCTIONS:

 Answer Question ONE and any other TWO questions

QUESTION ONE

a) Discuss some of the application areas of statistics in business   (8 marks)
b) The following data relates to the average price of meal in Makueni town collected from 50 kiosks

4 0	4 5	4 1	4 5	3 0	3 9	8	4 8	2 5	4 5
2 6	9	2 3	2 4	2 9	8	4 0	4 1	4 2	2 6
3 9	3 5	1 8	2 5	4 0	4 2	4 3	4 4	3 6	3 5
2 7	3 2	2 8	2 7	2 6	3 8	4 7	3 6	3 5	2 5
3 2	2 8	4 0	4 1	4 4	4 5	4 0	3 9	4 1	4 3

Required:
i) Prepare an appropriate frequency table   (6 marks)
ii) Mean   (2 marks)
iii) Mode   (2 marks)
iv) Median   (2 marks)
v) Q_2 (2 marks)

vi) D$_5$ (2 marks)
vii) Standard deviation   (2 marks)
viii)   Variance   (2 marks)
ix) Coefficient of variation   (2 marks)

QUESTION TWO

a) Explain 5 importance of index numbers in an economy   (5 marks)
b) The following table below are recorded data showing the test scores made by salesmen on an intelligence test and their weekly sales:

Salesmen	1	2	3	4	5	6	7	8	9	10
Test Score	40	70	50	60	80	50	90	40	60	60
Sales (Ksh m)	2.5	6	4	5	4	2.5	5.5	3	4.5	3

Required:

i)   Calculate regression equation of sales on test scores and estimate the probable weekly sales volume if a salesman makes a score of 100. Comment on your answer. (8 marks)

ii)   Using the same information above calculate correlation coefficient and comment on your answer   (7marks)

QUESTION THREE

a) Explain 6 challenges a researcher may encounter in the construction of index numbers   (6 marks)

c) Explain advantages of using time series analysis to a business   (6 marks)
d) The following table below are recorded data showing the test scores made by salesmen on an intelligence test and their weekly sales:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Sales (Ksh M)	76	80	130	144	138	120	90	174	190

Required:

i)   Calculate the trend values from 2010 to 2018   (6 marks)
ii)   Predict the sales for 2019   (2 marks)

QUESTION FOUR

a) Discuss importance of index numbers to a firm   (6 marks)
b) Discuss two bases of index computation   (2 marks)
c) A company gives on job training to its sales staff which are followed by a test. It 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 M)	31	36	48	37	50	45	33	41	39

Required:

i)   Compute the coefficient of correlation between test scores and sales made by the officers   (8 marks)

ii)   Inteprete your answer in (i) above   (2 marks)