

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATION**  
**RESIT/SUPPLEMENTARY / SPECIAL EXAMINATIONS**  
**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF**  
**COMMERCE, ENTREPRENEURSHIP, PROCUREMENT, AGRIBUSINESS**  
**MANAGEMENT AND COOPERATIVE MANAGEMENT**

**BCOM 262/AGBM 241: BUSINESS STATISTICS I****STREAMS:****TIME: 2 HOURS****DAY/DATE: MONDAY 01/11/2021****2.30 P.M - 4.30 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 Meru town collected from 50 shops

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

**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	0	60	0
Sales (Ksh m)	2.5	6	4	5	4	5	5	3	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 (7 marks)

**QUESTION THREE**

- a) Explain 6 challenges a researcher may encounter in the construction of index numbers (6 marks)
- c) Explain the importance of 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	9	24	1	26	22	15	20	19
Sales (ksh M)	31	6	48	7	50	45	33	41	39

Required:

- i) Compute the coefficient of correlation between test scores and sales made by the officers (8 marks)  
 ii) Comment on your answer in (i) above (2 marks)