CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATION

RESIT/SUPPLEMENTARY / SPECIAL EXAMINATIONS
EXAMINATION FOR THE AWARD OF BACHELOR OF COMMERCE, BACHELOR OF COOPERATIVE MANAGEMENT, BACHELOR OF ENTREPRENEURSHIP AND ENTERPRISE MANAGEMENT

BCOM 262: BUSINESS STATISTICS

STREAMS: BCOM Y2S1   **TIME: 2 HOURS**

DAY/DATE: THURSDAY 12/08/2021   **2.30 P.M - 4.30 P.M.**

INSTRUCTIONS:

- **Answer Question ONE and any other TWO questions**

QUESTION ONE

a) Discuss some basic steps a researcher must put into consideration while collecting data
   (5 marks)

b) Highlight important aspects one must consider while designing a questionnaire
   (5 marks)

c) Given the following data:

2	4	5	4	7	4	8	5	6	4
2	5	3	4	6	7	6	5	6	8
5		3	6	1	6	7	2	5	5
2	17	5	5	3	3	2	9	6	7
1	5	3	2	6	4	2	3	4	4
9	0	7	5	1	2	6	3	6	5
6	3	8	3	7	5	3	6	8	4
3	1	0	6	8	6	8	9	3	0

4	6	3	4	2	5	5	3	5	6
1	4	8	3	3	8	5	2	2	6

Required:

i) Prepare an appropriate frequency distribution table (6 marks) (ii) Mean (2 marks) (iii) Mode (2 marks) (iv) Median (2 marks) (v) Q_3 (2 marks) (vi) D_4 (2 marks) (vii) Standard deviation (2 marks) (viii) Variance (2 marks) (ix) Coefficient of variation (2 mark)

QUESTION TWO

a) Explain the importance of time series analysis to a business   (4 marks)

b) As a result of tests on 20,000 electric fans manufactured by a company, it was found that lifetime of fans was normally distributed with an average life of 2,040 hours and standard deviation of 60 hours. On the basis of the information, estimate the number of fans that is expected to run for:

   i) More than 2,150 hours (3 marks) (ii) less than 1,960 hours   (3 marks)

c) Explain 5 challenges a researcher may encounter in the construction of index numbers

   (5 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 2020   (2 marks)

QUESTION THREE

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: 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)

c) Explain 7 challenges a researcher may encounter in the construction of index numbers

(7 marks)

QUESTION FOUR

a) Discuss some of the application areas of statistics in business   (8 marks)

b) Discuss types of correlation   (6 marks)

d) The following table below are recorded data showing the test scores made by salesladies on an intelligence test and their sales.

Test Score	80	70	50	60	80	100	180	40	60	60
Sales (Ksh m)	5	6	4	5	4	2.5	11	3	4.5	3

Required: Using the information above calculate correlation coefficient and comment on your answer   (6 marks)

....