JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT
1ST YEAR 2ND SEMESTER 2017/2018 ACADEMIC YEAR
NAIROBI CITY LEARNING CENTRE

COURSE TITLE: BUSINESS STATISTICS 1

COURSE CODE: BBM 3122

EXAM VENUE: **STREAM:**

DATE: **EXAM SESSION:**

TIME:

INSTRUCTIONS:

1. Answer question **one** (compulsory) and any other **two questions**
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

Question one **(30marks)**

a) Define the following terms (4 marks)

i. Statistics

ii. Population

iii. Inferential statistics

iv. Descriptive statistics

b) Differentiate the following terms and give examples in each case

i. Discrete and continuous variables (2 marks)

ii. Primary and secondary source of data (4marks)

iii. population and a sample (4 marks)

c) Explain four advantages of using measures of dispersion in data analysis as oppose to measures of central tendency (4 marks)

d) Explain any four sampling techniques that are commonly used in statistics (4 marks)

e) Explain any four areas in which the knowledge of index numbers can be applied in a business setup (4 marks)

f) Regression and correlation analysis are two important areas of studies in business statistics. Explain the importance of each in business. (4 marks)

Question Two **(20marks)**

Given that the median for the distribution below is 43.75. Find the value of x (7 marks)

Value of sales (sh)	Number of sales
10- 20	2
20–30	4
30–40	8
40–50	12
50–60	x
60-70	3
70-80	1

And hence calculate:

a. The mean (5 marks)

b. the mode (3 marks)

c. The standard deviation of the sales. (5 marks)

Question Three: (20 marks)

a. Distinguish between additive and multiplicative models as used in time analysis (2 marks)

b. Explain four main component of time series analysis (8 marks)

c. Use the table below to compute:

i. an order 4 moving averages in temperature (5 marks)

ii. center 4 moving averages (5 marks)

Months	Jan	Feb	March	April	May	June	July	August	Sep	Oct	Nov	Dec
Temp	27	30	25	22	20	17	15	20	22	28	30	26

Question Four: (20marks)

(a) Explain four scales of measurements that are used in statistics (8 marks)

(b) The following table shows the relationship between quantities and revenues received from selling product K in the market. Use it to answer questions that follows

Quantities Sold (Tones)	20	40	33	55	48	35	45
Revenue received (000)	10	20	15	28	33	15	24

Required:

i. The regression model for the above data (6 marks)

ii. Correlation between the above variables (6 marks)