GRETSA UNIVERSITY - THIKA

UNIVERSITY EXAMINATIONS

JANUARY – APRIL 2017 SEMESTER

BACHELOR OF COMMERCE

COURSE CODE: BCBA 200

COURSE TITLE: BUSINESS STATISTICS

DATE: 6 APRIL 2017   **TIME: 8.00 AM – 11.00 AM**

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY.**
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

<u>**SECTION A**</u>

<u>**QUESTION ONE**</u>

(a) Measures of central tendency are ways of describing the central position of a frequency distribution for a group data. Discuss two measures of central tendency.

(4marks)

(b) A company collects a sample that contains the number of its employees who have been working at the company. Nine sample values are shown below

2, 7, 16, 9, 11, 5, 14, 10, 4,

Required

    (i)   Determine the sample mean   **(3marks)**

    (ii)   Determine the standard deviation   **(5marks)**

(c) There are two main sources of data in statistics, primary and secondary data. Distinguish between primary and secondary data.

(6marks)

(d) Briefly explain the following terms as used in statistics:-

        (i)   Coefficient of variation   **(2marks)**

        (ii)   Census   **(2marks)**

        (iii)   Secondary data   **(2marks)**

        (iv)   Population   **(2marks)**

(e) Statistics is used in all fields. Discuss how the knowledge of statistics may be applied in a business situation.

(6marks)

(f) Most of the research work is based on a sample. Discuss four reasons why it is important to study a sample instead of the whole population. **(8marks)**

SECTION B

QUESTION TWO

(a) Correlation is a measure of degree of relationship between two or more variables. Explain two types of correlation. **(4marks)**

(b) Distinguish between measures of central tendency and measures of dispersion. **(4marks)**

(b) The following data represents the performance in a statistics continuous assessment test of 8 students.

Score	32	45	50	63	60	75	72	35

Required:-

(i)	Compute the arithmetic mean	**(4marks)**
(ii)	Compute the standard deviation	**(6marks)**
(iii)	Compute the variance	**(2marks)**

QUESTION THREE

(a) Discuss the two main methods of data collection. **(4marks)**

(b) Regression analysis is a statistical tool that uses the relationship between two quantitative variables so that one variable known as the dependent variable can be predicted and controlled by the other variable known as the independent variable. Discuss two types of regression.

(4marks)

(c) Find the coefficient of correlation between traffic density and accident rate from the following information available. **(12marks)**

Traffic Density	30	35	40	45	50	60	70	80	90
Accident Rate	2	4	5	5	8	15	24	30	32

QUESTION FOUR

(a) The correlation analysis is a statistical tool which studies the relationship between two variables. Discuss two limitations of correlation. **(4marks)**

(b) Briefly explain the two uses of consumer price index. **(4marks)**

(c) The following table gives marks out of 50 awarded in a Statistics and a Microeconomics Continuous Assessment Test to the same group of students. Assuming there is a linear relationship between the set of marks.

Statistics	10	10	18	25	28	33	34	39	42	43
Microeconomics	11	22	22	19	35	27	33	40	42	47

Required:

Compute the regression line **(12marks)**

QUESTION FIVE

(a) Distinguish between descriptive and inferential statistics. **(4marks)**

(b) The following data relates to commodities consumed by families in Kenya in the years 2010 and 2014.

Commodity	2010 Price	2010 Quantity	2014 Price	2014 Quantity
Beef	200	400	300	800
Fish	300	200	400	400

Chicken	350	300	450	500	

Required:-

(i)   Constructing the working table   **(4marks)**

(ii)   Calculate Laspayer's price and quantity index   **(6marks)**

(iii)   Calculate Paasche's price and quantity index   **(6marks)**