JARAMOGI OGINGA ODINGA UNIVERSITYOF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATION 2012/2013

SECOND YEAR SECOND SEMESTER EXAMINATION FOR DEGREE OF BACHELOR OF BUSINESS ADMNISTRATION WITH IT

ABA 206 BUSINESS STATISTICS I (KLC) DATE:

INSTRUCTIONS:

1. **This paper contains FIVE questions**
2. **Answer question ONE and ANY other two questions**
3. **Write all answers in the booklet provided.**

QUESTION ONE

a) Differentiate between **Type I** and **Type II** errors as used in sampling theory **(4marks)**

b) State two properties of standard deviation that makes it more preferable to mode and median in descriptive statistics **(2marks)**

c) State **four** factors that should be considered by a researcher before choosing a source of data. **(4marks)**

d) Outline the process of testing Hypothesis**.** **(8marks)**

e) Given the Following Frequency Distribution,

Class	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	*3*	7	*14*	*18*	*9*	*4*	*6*

Determine the mean (A=64.5) the coefficient of variation**.** **(12marks)**

QUESTION TWO

(a)Three groups of suppliers show the following details over a long time on the supply of production components for manufacturing lubricants.

	Supplier A	**Supplier B**	**Supplier C**
Mean	32.5	19.3	51.5
Sample Size	8	N	17

If the three data sets have a combined mean of 34.5, determine the value of n hence the group with the highest valuation average **(7marks)**

(b) Given the prices and quantities of the following commodities

Commodity	**2009**		**2010**	
	Price	***Quantity***	***Price***	***Quantity***
1	100	14	120	12
2	150	23	135	24
3	88	18	85	26
4	115	15	100	22
5	65	20	80	20

Determine;

(i) Paasches's index **(4 marks)**
(ii) Fishers ideal index **(6 marks)**
(iii) Outline three advantages of index numbers**.** **(3marks)**

QUESTION THREE

(a) The following table shows marks obtained by 100 suppliers for Jaramogi Oginga Odinga University Of Science and Technology in a tendering process.

Marks	110-119	120-129	130-139	140-149	150-159	160-169	170-179	180-189
No. of Suppliers	3	4	10	26	22	18	8	9

Determine

(i) The mode
(ii) The mean
(iii) Standard deviation
(iv) First order rank of skewness

(15marks)

QUESTION FOUR

Following are the data of business supply and price of a company for nine years from 2000-2008.

Supply(units)	**80**	**82**	**86**	**91**	**83**	**85**	**89**	**96**	**93**
Price(Kshs)	**145**	**140**	**130**	**124**	**133**	**127**	**120**	**110**	**116**

By taking supply as (independent variable) and price as y(independent variable) obtain a regression line of the form **Y= a + bX**. What will be the level of price when supply quantities are 94 and 99 units respectively?

Determine spearman rank correlation coefficient between supply and price using a correction factor.**1/12(M^3-M** , hence standard error of observed

QUESTION FIVE

(a) Differentiate between the following terms;
   (i) Negatively skewed and positively skewed distributions (4 marks)
   (ii) Descriptive statistics and inferential statistics. (4 marks)

(b) A constituency A in Utopia district was divided into three areas: the Division Centers, Market and school Centers, and Rural areas. A survey of Bore - hole shallow wells by constituency development fund (CDF) was carried out and the following information was gathered.

There were 677,100 shallow – wells of which176, 100 were in rural areas. Of the shallow wells in markets school and centers, 406,000 were functioning and 4500 were under construction. In the division centers, 4000 were none functioning and 500 were under construction of the total 62,600. The total shallow – wells in the constituency under construction are 6,200 and those not functioning are 44,900.

Required

Tabulate the above information so as to give the maximum possible statistical information

(8marks)

(c) Explain four reasons why business organizations prefer questionnaires in conducting consumer surveys (4marks)