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(Knowledge for Development)

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATION**  
**2017/2018 ACADEMIC YEAR**  
**FIRST YEAR FIRST SEMESTER**  
**MAIN EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF COMMERCE AND  
BACHELOR OF BUSINESS MANAGEMENT**

**COURSE CODE: BCO 204/BBM 211**

**COURSE TITLE: BUSINESS STATISTICS**

**DATE: 18/01/2018      TIME: 2.00P.M- 4.00 P.M**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question **One** and Any other **Two** Questions

TIME: 2 Hours

KIBU observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over. 

## SECTION A (COMPULSORY)

### QUESTION ONE

- a) Distinguish between continuous variables and discrete variables giving one example in each case. 4mks
- b) Highlight three major characteristics of statistics. 3mks
- c) The table below shows marks of students in a statistics exam. If the arithmetic mean of the distribution is 52, find the value of t. 4mks

Marks	0-20	20-40	40-60	60-80	80-100
Frequency	8	t	19	14	9

- d) State three disadvantages of the mean as a measure of central tendency. 3mks
- e) From the following details, find the standard deviation of Y.  
Pearson's correlation coefficient ( $r$ ) = 0.6  
Covariance( $X, Y$ ) = 12  
Standard deviation of  $X$  = 5 3mks
- f) Give two differences between correlation and regression. 4mks
- g) Determine the standard deviation from the following set of data.  
20, 15, 19, 24, 16, 14 3mks
- h) State three shortcomings of consumer price index numbers. 3mks
- i) Identify three main functions of statistics to a business enterprise. 3mks

## SECTION B (ANSWER ANY TWO QUESTIONS)

### QUESTION TWO

- a) From the following data, calculate the Karl Pearson's coefficient of skewness using the mean, median and standard deviation and comment about it. 10mks

Age	10-20	20-30	30-40	40-50	50-60	60-70	70-80
frequency	18	30	40	55	38	20	16

- b) The table below shows the amount of fertilizer ( $X$ ) used and productivity ( $Y$ ) in a certain farm.

Fertilizer used in tonnes( $X$ )	15	18	20	24	30	35	40	45
Productivity of the farm( $Y$ )	85	93	95	105	120	130	150	160

Determine the Karl Pearson's coefficient of correlation and comment about it. 10mks

### QUESTION THREE

- a) The table below shows daily wages paid to workers in ABC Ltd company.

Daily wages(sh)	50-60	60-70	70-80	80-90	90-100	100-110	110-120
Number of workers	10	14	18	24	16	12	6

Calculate the percentile coefficient of kurtosis and comment about it. 10mks

- b) The table below shows income(X) in shillings and expenditure(Y) in shillings for mrTumbo in a period of 10 days.

Income in shillings(X)	41	65	50	57	96	94	110	30	79	65
Expenditure in shillings(Y)	44	60	39	51	80	68	84	34	55	48

- (i) Obtain a regression line of expenditure (Y) on income (X). 8mks
- (ii) Estimate the expenditure when income is sh 100. 2mks

### QUESTION FOUR

- a) Discuss five problems encountered in the construction of index numbers. 10mks
- b) The table below shows prices and quantities of maize, wheat and beans for 1989 and 1996.

**1989**

**1996**

	Price(sh)	Quantity(bags)	Price(sh)	Quantity(bags)
maize	65	20	135	30
wheat	95	8	160	7
beans	150	5	320	8

Using 1989 as the base year, calculate the following index numbers for 1996.

- i) Laspeyre's price index number. 3mks
- ii) Paasche's price index number. 3mks
- iii) Fisher's ideal price index number. 4mks

**END  
GOOD LUCK**