MERU UNIVERSITY COLLEGE OF SCIENCE & TECHNOLOGY

P.O. Box 972-60200 Meru - Kenya. Tel: 020-2092048, 020 2069349
Fax: 020-8027449

University Examinations 2011/2012

FIRST YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA/CERTIFICATE IN BUSINESS ADMINISTRATION

HDC 0102: INTRODUCTION TO BUSINESS STATISTICS

DATE: APRIL 2012   **TIME: 1½HOURS**

INSTRUCTIONS: *Answer question **one** and any other **two** questions*

QUESTION ONE – (30 MARKS)

a) Distinguish between the following
   i.   Descriptive statistics and inferential statistics.   (2 Marks)
   ii.   Skewness and Kurtosis   (2 Marks)
   iii.   Simple correlation and multiple correlation.   (2 Marks)

b) Describe the stages in statistical investigation.   (5 Marks)

c) Discuss three problems encountered when construction index numbers.   (3 Marks)

d) Describe two methods of collecting primary data.   (4 Marks)

e) Daily income of ten families is given below. find out geometric mean income. (in £)
85,70,15,75,500,8,45,250,40,36.   (5 Marks)

f) Calculate arithmetic mean from the following data

Wages (000 ksh)	0-10	10-30	30-60	60-100
No of workers	5	12	25	8

(7 Marks)

QUESTION TWO (20 MARKS)

a) Describe the uses of regression analysis.   (4 Marks)

b) The following data give the experience of machine operators and their performance ratings as given by the number of good parts turned out per 100 pieces;

Operator	1	2	3	4	5	6	7	8
Experience (x)	16	12	18	4	3	10	5	12
Performance ratings (y)	87	88	89	68	78	80	75	83

Required;

i.   Plot the data on scatter diagram. (4 Marks)
ii. Calculate the regression line of performance rating on experience.

(8 Marks)
iii. Estimate the probable performance if an operator has 7 years of experience.

(4 Marks)

QUESTION THREE (20 MARKS)

a) Discuss the components of a time series. (8 Marks)
b) Calculate the trend values by the method of the 4-yearly moving averages from the data below relating to production of coffee in thousands of tones over a period of 10 years

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Production (000 tonnes)	464	515	518	467	502	540	557	571	586	612

(12 Marks)

QUESTION FOUR (20 MARKS)

a) Describe two properties of arithmetic mean. (4 Marks)
b) Compute index numbers of price from the following data using
   i.   Laspeyre's index
   ii. Paasche's formula
   iii. Fishers ideal formula
   iv. Marshall edge worth formula

Interpret your results in each case. (16 Marks)

	Base year		Current year	
Commodity	Quantity	Price	Quantity	price
A	8	4	10	9
B	7	3	8	5
C	6	4	5	8
D	5	2	7	4

QUESTION FIVE (20 MARKS)

a) Distinguish between correlation and causation. (2 Marks)
b) Explain the purpose of classifying data. (4 Marks)
c) The profits (in million shillings) earned by 100 companies during the 2011 financial year are shown below.

Profits (million Ksh)	No. of companies
20-30	4
30-40	8
40-50	18
50-60	30
60-70	15
70-80	10
80-90	8
90-100	7

Required;

Compute

i.	Arithmetic mean	(5 Marks)
ii.	Median	(4 Marks)
iii.	Standard deviation.	(5 Marks)