MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BANKING, ACCOUNTING & FINANCE

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

DIPLOMA IN ACCOUNTING

DIPLOMA IN EDUCATION

DACC 105: BUSINESS STATISTICS AND CALCULATIONS

DATE: 14/12/2017 **TIME: 11:00 – 1:00 PM**

INSTRUCTIONS:
Answer question one and any other two questions
Do not write on the question paper
Additional instructions are contained in the answer booklet

QUESTION ONE (COMPULSORY) (30 MARKS)

a) State three advantages of regression analysis as a method of statistical decision making and prediction. (3 marks)

b) State seven advantages of using diagrams in data presentation. (7 marks)

c) The following information shows the sales and advertising expenditures of Kimu Ltd over the past six years

YEAR	ADVERTISING(X)	SALES SH (MILLIONS) (Y)
2009	7	200
2010	10	250
2011	9	300
2012	10	320
2013	11	350
2014	13	380

REQUIRED

i. Determine the linear regression line in the form Y= a+bx Using simple linear regression method.

ii. Determine the total cost for 2015 and 2016 if estimated number of advertisements will be 20 and 25 respectively. (20 marks)

QUESTION TWO (20 MARKS)

a) Highlight any four properties of the mean as a statistical measure. (4 marks)

b) The relative frequency distribution of the number of computers not able to communicate with others in the network on any given day during the semester in a college is as shown in the table below

No of computers	2	3	4	5	6	7	8	9
Relative frequency	0.10	0.18	0.25	0.20	0.12	0.08	0.05	0.02

Determine the following measures about the number of computers not able to communicate with others in the network on any given day.

i) Median

ii) Mean

iii) Standard deviation (16 marks)

QUESTION THREE (20 MARKS)

The number of tonnes of tea exported from Kericho District over a period of seven years are shown in the table below.

YEAR	TEA EXPRTS (tonnes)
1	3
2	7
3	6
4	8
5	9
6	7
7	10

a) Using the least square method, determine the equation of the trend line of tea exports

b) Estimate the number of tonnes of tea that the farmers of Kericho District anticipate to export in the 8^{th} year. (14 marks)

c) State six qualities of a good average(measure of central tendency) (6 marks)

QUESTION FOUR (20 MARKS)

a) Define the term statistics. (2 marks)

b) State and explain four methods of data classification. (8 marks)

c) Consider the following data in hour relating to the arrival of first year students in the university on the first day of reporting.
2,3,4,3,5,2,24,22,23,11,22,19,6,7,16,12,10,14,17,18,15,13,21,9,7,5,1,3,4,2,10,9,29,27,26, 25.

Required

Group the above data taking the class intervals as 5(five) using

i) Inclusive form of grouping

ii) Exclusive form of grouping (10 marks)

QUESTION FIVE (20 MARKS)

a) State five advantages of arithmetic mean (5 marks)

b) State five properties of a good measure of dispersion (5 marks)

c) Explain what is meant by the term probability (2 marks)

d) Explain two rules of probability giving an example of each (4 marks)

e) The probability that a man aged 55 years will be alive in 2018 is 5/8, while the probability that his wife who is aged 53 years will be alive in 2018 is 5/6.

Determine the probability that in 2018

i) Both will be alive (2 marks)

ii) That one of them will be alive (1 mark)

iii) Only the wife will be alive (1 mark)