MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BANKING, ACCOUNTING & FINANCE

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

DIPLOMA IN ACCOUNTANCY

QUANTITATIVE TECHNIQUES

<u>**DATE: 15/4/2019**</u>   <u>**TIME: 8:30 – 11:30 AM**</u>

INSTRUCTIONS :

Answer All Five Questions

1.   The cost of 6 tables and 5 chairs is Kshs 28,750 while the cost of 3 tables and 7 chairs is

Kshs 21,350 determine the:

i)   Price of **one** chair

ii)   Price of **one** table   (14 marks)

2.   The following set of data represents the distribution of annual salaries of a randomn
sample of 100 managers in a large multinational company:

Salary Range (£ '000)	Managers
20 but under 25	5
25 but under 30	10
30 but under 35	25
35 but under 40	35
40 but under 45	25
45 but under 50	5

i) Calculate the mean and standard deviation

ii) The company chairman claims that the managers in the company earn on average annual salary in excess of £35500. Use the result in (i) to test the chairman's claim at 95% level of confidence. (14 marks)

3. a) State **four** areas in business where quantitative techniques may be applied
(4 marks)

b) Solve for x in the following expression. (3 marks)

$$\frac{2x-1}{5} + \frac{x}{10} = 20$$

c) Outline four factors that should be considered before using secondary data

(4 marks)

d) State three factors that determine the accuracy of a sample (3 marks)

4. a) Peter deposited Kshs 200,000 in a fixed deposit account that paid interest at a rate of 16% per annum. Determine:

i) The total amount in the account after 5 years

ii) Interest earned on deposit (3 marks)

b) A student scored 65,47,76 and 54 and x marks in five subjects. Given that his average mark was 60, determine the value of x. (3 marks)

c) Outline **four** advantages of Mean as a measure of central tendency. (8 marks)

5.   a)   Explain **four** advantages of the interview method in a data collection   (4 marks)

b)   The table below shows the distribution of monthly rent of 300 houses in an estate.

Monthly rent (Kshs)	Number of houses
40,000 - 60,000	16
60,000 - 80,000	24
80,000 -100,000	59
100,000 -120,000	100
120,000 - 140,000	41
140,000 - 160,000	31
160,000 - 180,000	19
180,000 -200,000	10

i)   Draw a histogram to present the data above;   (7 marks)

ii)   Using the histogram in (i) above, estimate the rent paid by the majority of the tenants .

(3 marks)