

W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2017/2018**

**YEAR I SEMESTER I/ SEMESTER II EXAMINATION FOR THE CERTIFICATE IN BUSINESS MANAGEMENT**

**HCB 0105: INTRODUCTION TO QUANTITATIVE METHODS**

**DATE: AUGUST 2018 TIME: 1 ½ HOURS**

**INSTRUCTIONS: ANSWER ANY THREE QUESTIONS**

**QUESTION ONE (20 MARKS)**

1. Define the following concept precisely;
2. An empty set
3. The null set
4. The infinity set
5. A union set
6. The intersection set.
7. A company has 60 employees in the 1st department, 68 employees in the 2nd department and 76 employees in the 3rd department and so on in the same increasing pattern. If the company has 20 departments;
8. How many employees are in that company?
9. What is the common difference between any two departments?

**QUESTION TWO (20 MARKS)**

1. A firm rents its premises and rental agreement provides for a regular increase of $2650. If the rent in the 1st year is $8500, what is the rent in the 20th year?
2. How much will have to be invested now to produce $20,000 after 5 years with a 10% compound interest.

**QUESTION THREE (20 MARKS)**

With an example, differentiate the following;

1. Primary data from Secondary data
2. Quantitative data from Qualitative data
3. Continuous data from discrete data
4. Statistics from statistic

**QUESTION FOUR (20 MARKS)**

The data provided below is on individual rate of payment of fifteen employees in TZ shillings (in thousand ‘000’)

100 100 110 110 130

100 120 140 100 120

110 100 110 130 100

(a) Prepare a frequency distribution table with the value 100, 110, 120, 130, 140

(b) Construct a bar chart of rate of payments against the frequencies

**QUESTION FIVE (20 MARKS)**

1. What is statistics?
2. Mention at least THREE importance of statistics.
3. List down SIX scientific process/methods that statistics discipline is said to be concerned with.
4. Mention at least FOUR methods of data presentation.
5. What are the methods of data collection in statistics?