



# The Co-operative University of Kenya

**END OF SEMESTER EXAMINATION AUGUST -2018**

**EXAMINATION FOR THE CERTIFICATE IN CO-OPERATIVE MANAGEMENT**  
**(YR I SEM II)**

**UNIT CODE: CCM 1116**

**UNIT TITLE: INTRODUCTION TO STATISTICS**

**DATE: 27<sup>TH</sup> AUGUST, 2018**

**TIME: 9:00 AM – 11:00 AM**

### **INSTRUCTIONS:**

- Answer question **ONE (compulsory)** and any other **TWO** questions

### **QUESTION ONE**

- Distinguish between descriptive and inferential statistics. (4 Marks)
- Explain any **THREE** benefits of statistics in co-operative business. (6 Marks)
- Distinguish between primary and secondary data. (4 Marks)
- Describe any **TWO** methods of data collection indicating one advantage and one disadvantage of each method. (6 Marks)
- How is a histogram different from a bar chart? (6 Marks)
- There are two branches of a company employing 100 and 80 employees respectively. If the arithmetic mean of the monthly salaries paid by the **TWO** branches are \$4570 and \$ 6750 respectively. Find the arithmetic mean of the salaries of the employees of the company put together. (4 Marks)

### **QUESTION TWO**

- Distinguish between measures of central tendency and measures of dispersion. (4 Marks)
- Explain **TWO** ways in which statistics may be misused. (4 Marks)
- Calculate the arithmetic mean of the following data  
130, 135, 140, 145, 146, 148, 150 (4 Marks)
- Find the media mean and mode from the following data. (8 Marks)

<b>Marks</b>	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 -80
<b>No. of Students</b>	2	18	30	45	35	20	6	3

### **QUESTION THREE**

- Distinguish between stratified and random sampling. (4 Marks)
- State any **FOUR** measures of dispersion (4 Marks)
- Describe the research process (10 Marks)
- Differentiate between probabilistic and non probabilistic methods of sampling. (2 Marks)

### **QUESTION FOUR**

- Define the term skewness. (2 Marks)
- Explain the qualities of a good average (6 Marks)
- The following data 58, 32, 41, 47, 56, 80, 42, 29, 32, 78  
Calculate  
Mean (3 Marks)  
Variance (6 Marks)  
SD (3 Marks)

**QUESTION FIVE**

(a) Calculate Q1, Q3, D7, P85 from the following data.

(12 Marks)

<b>Earning (sh. 000's)</b>	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
<b>No. of employees</b>	3	6	10	15	24	42	75	90	79	55	36	26	19	13	7

(b) Give the advantages of using the following types of averages.

Mean

(3 Marks)

Median

(2 Marks)

Mode

(3 Marks)