



The Co-operative University College of Kenya
(A Constituent College of Jomo Kenyatta University of Agriculture & Technology)

END OF SEMESTER EXAMINATION APRIL, 2016

**EXAMINATION FOR THE DEGREE OF BACHELOR OF CO-OPERATIVES AND
COMMUNITY DEVELOPMENT (YR I SEM II)**

UNIT CODE: CMMC 2107

UNIT TITLE: STATISTICS I

DATE: 19TH APRIL, 2016

TIME: 2:00 PM – 4:00 PM

INSTRUCTIONS:

Answer Question **ONE** and any other **TWO** questions.

QUESTION ONE

- a) Briefly describe five qualities of a good average (5 Marks)
- b) The data below shows the age distribution of consumers who shopped at Real Supermarket on a certain day

Age	10-20	20-30	30-40	40-50	50-60	60-70
No. of Consumers	10	13	21	10	7	9

Required: Calculate

- i. The arithmetic mean (3 Marks)
- ii. The median (6 Marks)
- iii. Variable and standard deviation (5 Marks)
- iv. 60th percentile (3 Marks)
- v. Lower quartile (4 Marks)
- vi. Interquartile range (4 Marks)

QUESTION TWO

- a) Discuss any **FOUR** importances of statistics in business (8 Marks)
- b) Differentiate between inferential statistics and descriptive statistics (4 Marks)
- c) Calculate the interquartile range and percentile range of the following frequency distribution (8 Marks)

Age in Years	Number of persons
1-5	7
6-10	10
11-15	16
16-20	32
21-25	24
26-30	18
31-35	10
36-40	5
41-45	1

QUESTION THREE

- a) Explain FOUR sources of errors in measurement (4 Marks)
- b) From the information given about each of the following set of data, work out the missing values in the table:

	n	Σx	Σx^2	\bar{x}	s
A	63	7623	924800		
B		152.6		10.9	1.7
C	52		57300	33	
D	18			57	4

- c) Distinguish between Kurtosis and Skewness (4 Marks)
- d) Explain TWO limitations of statistics (4 Marks)

QUESTION FOUR

- a) Differentiate between primary and secondary data as used in statistics (4 Marks)
- b) Calculate the geometric mean of the following set of data
4, 5, 20 and 25 (4 Marks)
- c) From the following data calculate the measure of skewness and its coefficient (12 Marks)

X	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	18	30	40	55	38	20	16

QUESTION FIVE

- a) Explain any THREE methods of data collection (6 Marks)
- b) Differentiate between random and stratified sampling techniques (4 Marks)
- c) Find the standard deviation from the mean and coefficient of mean deviation from the following data (6 Marks)

Marks	20	30	40	50	60	70
No. of students	8	12	20	10	4	6

- d) Differentiate between tabulation and classification as used in statistics (4 Marks)