



# MASENO UNIVERSITY

## UNIVERSITY EXAMINATIONS 2012/2013

### SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR THE DIPLOMA IN BUSINESS ADMINISTRATION (HOMA BAY CAMPUS)

#### **ADB 0104: BUSINESS STATISTICS**

*Date: 26<sup>th</sup> July, 2013*

*Time: 2.00 – 4.00pm*

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#### **INSTRUCTIONS:**

- ◆ Answer QUESTION ONE and any other TWO questions.
- ◆ Marks allocated are shown at the end of each question.
- ◆ Neatness is vital.

### QUESTION ONE

a) (i) Differentiate between statistics and data (4 marks)

(ii) State any three types of *mean* in statistics (3 marks)

Using the following figures, calculate arithmetic mean and the median.

28, 6, 5, 24, 15, 8, 10 (4 marks)

b) (i) What is skewness? (4 marks)

(ii) Draw different sketches to indicate different types of skewness and roughly locate the positions of the mean, median and mode in each case. (7 marks)

c) The following are marks obtained by students in business statistics:

Marks	No. Of Students
10 or less:	4
20 or less:	10
30 or less:	30
40 or less:	40
50 or less:	47
60 or less:	50

Sketch a 'less than' ogive curve on your answer booklet and show therein

- The range of marks scored by middle 40% of the students, and
- The median. (8 marks)

### QUESTION TWO

a) State and briefly explain any three basic principles for forming a grouped frequency distribution. (6 marks)

b) Form a grouped frequency distribution from the following data by inclusive method, taking 4 as the magnitude of class interval:

10, 17, 15; 22, 11, 16, 19, 24, 29, 18, 25, 26, 32, 14, 17, 20, 23, 27, 30, 12, 15, 18; 24, 36, 18, 15, 21, 28, 33, 38, 34, 13, 10, 16, 20, 22, 29, 19, 23, 31. (14marks)

### QUESTION THREE

- a) A candidate obtained the following percentages of marks in an examination: English 60; Religion 75; Mathematics 63; Physics 59; Chemistry 55. Find the candidate's weighted arithmetic mean if weights 1, 2, 1, 3, 3 respectively are allotted to the subjects. **(10 marks)**
- b) The following data represent masses to the nearest kilogram of meat supplied to various consumers in one day.

Mass	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44
No. Of consumers	6	20	12	10	5	6	2	1

Using the data draw a histogram,

- i. A histogram and
- ii. A polygon **(10 marks)**

### QUESTION FOUR

- a) Briefly define what probability is. **(5 marks)**
- b) Ten balls were placed in two bags. The first bag contained 4 balls such that 3 were blue and 1 was red. The second bag contained 6 balls of which 4 were green and two were white. If a ball was drawn from each bag at random, what was the probability of obtaining:
- i. A blue and a green balls **(5 marks)**
  - ii. A red and a green balls **(5 marks)**
  - iii. A red and a white ball **(5 marks)**

