



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2016/2017**

**SECOND YEAR SECOND SEMESTER EXAMINATION  
FOR THE DEGREE OF BACHELOR OF BUSINESS  
ADMINISTRATION (BUSINESS STUDIES)  
AGRIBUSINESS MANAGEMENT, EDUCATION AND BA  
(ECONOMICS) WITH INFORMATION TECHNOLOGY**

**MAIN CAMPUS**

**ABA 206: BUSINESS STATISTICS I**

Date: 8<sup>th</sup> June, 2017

Time: 8.30 - 11.30am

---

**INSTRUCTIONS:**

- Answer Question ONE and any other THREE.
- Question one carries 25 marks and the rest 15 marks each.



1. QUESTION ONE (Compulsory)

(a) Briefly explain the following terms as used in Business Statistics. (3 marks)

- i. kurtosis
- ii. probability
- iii. index numbers

(b) State two characteristics of a good measure of variation. (2 marks)

(c) The probability that an applicant is shortlisted for an interview is  $\frac{1}{20}$  and the probability that the applicant is shortlisted and attends the interview is  $\frac{3}{5}$ . Determine the probability that the applicant attends the interview given he/she is shortlisted. (4 marks)

(d) Critically examine the use of regression analysis in business Statistics. (4 marks)

(e) Explain the steps in drawing decision trees as used in decision theory. (4 marks)

(f) Given the following set of data shows the mass of sugar in kg purchased from a local stockist in Kisumu City.

| Mass(kg) | 10-14 | 15-24 | 25-29 | 30-39 | 40-44 |
|----------|-------|-------|-------|-------|-------|
| Number   | 2     | 11    | 15    | 14    | 9     |

Determine the median mass. (5 marks)

(g) Explain any two types of statistics. (3 marks)

2. QUESTION TWO (15 marks)

(a) Differentiate between mode and median with reference to a frequency distribution. (4 marks)

(b) Explain the two main categories of sources of data and give relevant examples in each case. (4 marks)

(c) Using the following set of data, calculate the mode; (7 marks)

| Class     | 0-9 | 9-19 | 19-29 | 29-39 | 39-49 |
|-----------|-----|------|-------|-------|-------|
| Frequency | 5   | 7    | 13    | 11    | 4     |

3. QUESTION THREE (15 marks)

(a) Explain the characteristics of index numbers. (4 marks)

(b) Discern between negatively and positively skewed distributions. (4 marks)

(c) Calculate the coefficient of variation for the following set of data.

| X | 10 - 19 | 20 - 29 | 30 - 39 | 40 - 49 |
|---|---------|---------|---------|---------|
| f | 8       | 11      | 12      | 9       |

(7 marks)

4. QUESTION FOUR (15 marks)

(a) State Bayes theorem. (2 marks)

(b) Discuss the necessity of index numbers in business administration. (5 marks)

- (c) An Economist believes that during periods of high economic growth, the Kenyan Shilling appreciates with probability 0.70; in periods of moderate economic growth, it appreciates with probability 0.40; and during periods of low economic growth, it appreciates with probability 0.20. During any period of time the probability of high economic growth is 0.30; the probability of moderate economic growth is 0.50 and the probability of low economic growth is 0.20. Suppose the Kenyan Shilling value has been appreciating during the present period. What is the probability that we are experiencing the period of low economic growth? (7 marks)

5. QUESTION FIVE (15 marks)

- (a) Giving relevant examples, briefly explain the meaning of sampling. (3 marks)
- (b) Explain how business statistics may be abused in management. (6 marks)
- (c) Given 1,4,2,5,8,10 and are shoe sizes in a given supermarket outlet, calculate the geometric mean shoe size. (6 marks)