



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

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN  
BUSINESS ADMINISTRATION; DIPLOMA IN PURCHASING AND  
SUPPLIES MANAGEMENT**

**CITY CAMPUS**

**ADB 0104: BUSINESS STATISTICS**

**Date:** 24<sup>th</sup> November, 2016

**Time:** 2.00 – 5.00pm

**INSTRUCTIONS:**

- Attempt Question ONE (Compulsory) and any other TWO.



### QUESTION ONE

- Explain in detail what you understand by **business statistics**. (6 marks)
- Explain methods used in construction of simple index numbers. (4 marks)
- Omar wants to invest in project Y that has a cost of kshs. 500,000 and results in equal cash flows of kshs. 400,000 for 3 years. Find out whether the project is acceptable or not if the firm's cost of capital is 16%. (6 marks)
- Highlight on the shortcomings of Payback Period Method. (4 marks)
- Suppose a student wants to find out how much she will have at the end of 3 years. If she deposits 10,000/= at the end each year in an account paying 4% interest. What will she have at the end of 3 years? (4 marks)
- Describe the importance of time series analysis in Business Management (6 marks)

### QUESTION TWO

- Find the future value of 100,000 compounded at 6% annually, semi-annually and quarterly after 3 years. (6 marks)
- Using relevant examples explain what is meant by the following terms as used in mathematics for finance. (8 marks)
  - Time value of money
  - Future values
  - Intra-period compounding
  - Annuities
- Briefly explain any **THREE** shortcomings of consumer price index (6 marks)

### QUESTION THREE

- What is capital investment? (2 marks)
- Citing examples, explain the various types of index numbers. (8 marks)
- Desmond's investment in a cosmetic business generates the following cash flow stream.

YEAR	0	1	2
CASH FLOW	20,000	16,000	12,000

The cost of capital is 20%. Find the NPV of this project

(10 marks)

#### QUESTION FOUR

- a) Using relevant examples **highlight** uses of index numbers. (10marks)
- b) The retail price of a typical commodity over a period of four years is given below;

Year	1997	1998	1999	2000
Price(kshs)	24.60	25.35	26	26.50

- I. Find the price index based on 1997 prices. (2marks)
- II. Find the % change in prices btw. Consecutive years using base year as 1997. (2marks)
- c) The data below are for marks scored out of a 100 by 21 students in a statistics exam.
- 45 54 75 54 50 50 54  
46 75 54 50 54 54 54  
50 50 46 75 54 54 54
- REQUIRED:** Prepare a frequency distribution for the above data. (6marks)

#### QUESTION FIVE

- a) Consider the below data extracted from the records of XYZ company.

Class	5- 10	10-15	15-20	20- 25	25-30	30-35	35-40	40- 45
Frequency	8	9	15	11	6	3	2	5

Required:

- i. Mean ( 6marks)
- ii. Median ( 4marks)
- iii. Mode (4 marks)
- b) Karl pearson second coefficient of skewness (6marks)