# TECHNICAL UNIVERSITY OF MOMBASA

## Faculty of Business & Social Studies

DEPARTMENT OF MANAGEMENT SCIENCE

DIPLOMA IN PROCUREMENT AND MATERIALS MANAGEMENT
DIPLOMA IN LOGISTICS AND TRANSPORT MANAGEMENT
DIPLOMA IN HUMAN RESOURCES MANAGEMENT
DIPLOMA IN BUSINESS ADMINSTRATION
DIPLOMA IN BUSINESS MANAGEMENT
DIPLOMA IN ACCOUNTANCY
DIPLOMA IN SALES AND MARKETING

**BAC2103: BUSINESS STATISTICS**

END OF SEMISTER EXAMINATIONS

**SERIES:** DECEMBER 2016

**TIME:** 2HOURS

**INSTRUCTIONS**

This paper contains **FIVE** questions .Answer question **ONE (COMPULSORY)** and any other **TWO** questions

**PART A**

**QUESTION ONE (Compulsory)**

During the testing of access time to computer program, the following data was obtained.

| Access time (milliseconds) | frequency |
|---|---|
| 30 but less than 35 | 17 |
| 35but less than 40 | 23 |
| 40 but less than45 | 27 |
| 45 but less than 50 | 20 |
| 50 but less than 55 | 11 |
| 55 but less than 60 | 2 |

Required:

a) The mean access time of the program. (4marks)
b) The median access time of the program. (4 marks)
c) The modal access time of the program. (3 marks)
d) Standard deviation of the access time. (6 marks)
e) Q3 access time (3 marks)
f) Explain FIVE methods used in sampling inquiry (10 marks)

**QUESTION TWO**

**Abc** ltd produces apples bananas and coconuts. The sales for four years is as follows in ksh" 000

| year | apples | bananas | coconuts | total |
|---|---|---|---|---|
| 2005 | 50 | 80 | 30 | 160 |
| 2006 | 60 | 100 | 50 | 210 |
| 2007 | 70 | 120 | 60 | 250 |
| 2008 | 90 | 140 | 70 | 300 |

Required

a) Draw a simple bar chart (3marks)

b) Draw a acomponent bar chart (4marks)

c) Draw a multiple bar chart (4marks)

d) Draw a pie chart for yearly totals (3marks)

a) Define the following types of data:

i. Continuous data (2 marks)

ii. Primary data (2 marks)

iii. Secondary data (2 marks)

**QUESTION THREE**

a) Discuss four considerations for constructing index numbers, (8 marks)

b) Consider following the data below,

| | 2013 | | 2014 | |
|---|---|---|---|---|
| Product | Price(£) | Quantity | Price(£) | Quantity |
| A | 8 | 20 | 10 | 24 |
| B | 12 | 16 | 14 | 24 |
| C | 20 | 10 | 24 | 8 |
| D | 6 | 6 | 8 | 3 |

Compute:

i) Laspeyre's price index (4 marks)

ii) Paasche's price index (4 marks)

iii) Fisher's price index (4 marks)

**QUESTION FOUR**

a) The following data shows a frequency distribution of heights of workers working in a chemical plant.

| Heights(inches) | 64.5-66.5 | 66.5-68.5 | 68.5-70.5 | 70.5-72.5 | 72.5-74.5 |
|---|---|---|---|---|---|
| Number of employee | 1 | 4 | 9 | 4 | 2 |

i. Draw an ogive to represent the data (9 marks)

ii. Use the graph to estimate the lower and upper quartile. Hence evaluate the interquartile range. (6 marks)

**QUESTION FIVE**

The following table gives the number of people in a country and their share of the national wealth.

| Number of people in thousands | Wealth in thousands of shillings |
|---|---|
| 13,000 | 5,200 |
| 16,000 | 12,800 |
| 16,000 | 48,000 |
| 2,000 | 50,000 |
| 500 | 25,000 |
| 47,500 | 141,000 |

Required:

a) Lorenz curve to represent the data (17 marks)

b) Interpret the distribution (3 marks)