TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF BUSINESS

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: MAY 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)	Cumulative frequency
30 but less than 35	17
35but less than 40	41
40 but less than45	60
45 but less than 50	88
50 but less than 55	107
55 but less than 60	120

Required:

a) The mean access time of the program. (8 marks)
b) Standard deviation of the access time. (6 marks)
c) Coefficient of variation (6 marks)
d) Coefficient of skewedness (6 marks)
e) State the qualities of a good average (4 marks)

QUESTION TWO

The following figures (£ 10m) give the turnover and profit before taxation for a company:

Turnover	106	125	147	167	187	220
Profit	10	12	16	17	18	22

Required:

a) Find regression equation of profit on turnover. (8 marks)
b) Using the regression equation, estimate profit where the turnover is:
   i. 95 (3 marks)

ii. 258 (3 marks)

c) 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)

b) Write brief notes on the following sampling techniques:

i. Stratified sampling (2 marks)

ii. Systematic sampling (2 marks)

iii. Simple random sampling (1 m arks)

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)