University Examinations 2012/2013

FIRST YEAR, SECOND SEMESTER EXAMINATIONS FOR CERTIFICATE /DIPLOMA IN
BUSINESS ADMINISTRATION/DIPLOMA IN PURCHASING AND SUPPLIES MANAGMENT

HDC 0102: INTRODUCTION TO BUSINESS STATISTICS

DATE: AUGUST 2012   **TIME: 1½HOURS**

INSTRUCTIONS: *Answer all question in section (A) and section (B) answer any two question*

SECTION A

QUESTION ONE – 30 MARKS

(a) (i) Define the term statistics   (2 Marks)

    (ii) State 3 purpose of studying statistics   (3 Marks)

(b) (i) Differentiate between primary and secondary sources of data.   (2 Marks)

    (ii) Give two examples of primary source and two of secondary source.   (4 Marks)

(c) The table below show the marks obtained by 100 students in an exam. Use the table to answer the question that follow:-

Marks	11-20	21-30	31-40	41-50	51-60	61-70	71-80
Frequency	4	16	27	32	15	4	2

    (i)   Find the (a) Mean.   (3 marks)

                   (b) Median   (4 marks)

    (ii)   Determine the Quartile deviation.   (5 marks)

(d) If the price of beef in 2009 was Ksh.200 per kg and 2011 was Ksh.250 per kg,
with 2009 as the base. Calculate the price relative of beef.   (3 marks)

(e) The table below shows the weight in kilograms of a certain group of 300 people.
Use it to draw a cumulative frequency graph for the data.   (4 marks)

Weight	41-50	51-60	61-70	71-80	81-90	91-100	101-110
frequency	10	40	95	25	80	45	5

SECTION B

Answer any two question

QUESTION TWO – (20 MARKS)

a) A sample of 250 students were asked to indicate their favorite TV station and their responses were as follows KBC 28, Citizen 52 KTN 63, NTV 15 and Kiss 92. Present the information in a pie chart. (5 marks)

b) The following marks were obtained by a student in an exam. Use the marks to calculate the mean absolute deviation. 24,32,38,49,55,78,85,87. (5 marks)

c) Using scatter diagrams illustrate 3 types of correction. (6 marks)

d) The table below shows heights of 40 plants collected form a forest.

Height, cm	25-34	35-44	45-54	55-64	65-74	75-84	85-94
NO. of plants	2	6	10	14	4	3	1

Using an assumed mean of 54.5 – Calculate the standard deviation. (4 marks)

QUESTION THREE – (20 MARKS)

The table below shows the marks of 100 students in an examination.

Marks	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Frequency	4	9	16	24	18	12	8	5	3	1

a) Determine the median and quartiles (9 marks)
b) If 55 marks was the pass mark estimate how many students passed. (3 marks)
c) Find the pass mark if 30% of the students are to fail. (3 marks)
d) Determine the range of marks obtained middle 80% of students. (5 marks)

QUESTION FOUR – (20 MARKS)

The data below shows marks obtained by 50 students.

54	45	50	59	50	61	52	57	60	58
62	42	49	38	55	65	57	54	70	58
59	61	56	60	36	50	40	63	50	59
60	50	67	69	60	71	65	45	48	57
59	62	63	51	58	64	50	67	49	47

a) Using classes of 35-39, 40-44, prepare a frequency distribution table. (3 marks)
b) Using 57 as the assumed mean find the mean of data. (4 marks)
c) From the grouped data draw a histogram and a frequency polygon on the same axis. (7 marks)
d) Calculate the mode. (6 marks)

QUESTION FIVE – (20 MARKS)

The table below shows the reading speeds in works per minute of a sample of 90 adults.

Speed wpm	121-140	141-160	161-180	181-200	201-220	221-240	241-260	261-280	281-300
Freq.	2	6	21	26	18	9	4	3	1

a) (i) Draw an o give   (5 marks)

    (iii)   Using the o give estimate the median and the quartiles.   (6 marks)

b) A tycoon has three house girls who he pays Ksh.2000 per month each, two Watchmen who receive Ksh.2500 per month and some gardeners who he pays Ksh3500 each. If he pays out an average of 2850 per month to these people. Find the number of gardeners.   (4 marks)

c) The table below shoes the price index numbers of food in 2008 with 2005 as the base year.

Item	Weight	Price relatives
Maize flour	5	138
Wheat flour	2	133
Rice	2	130
Cereals	3	118
Sugar	3	176

Calculate the retail price index.   (5 marks)