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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2016/2017 ACADEMIC YEAR
DIPLOMA IN BUSINESS ADMINISTRATION

DBA 009 - INTRODUCTION TO STATISTICS

Date: 15th August, 2016.

Time: 3.30pm – 5.30pm

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Define the following terms;
- i) Statistic
 - ii) Pie chart
- b) State the different scales of measurements (types of statistical data). (2 Marks)
- c) It is known that the price of a commodity has risen by 6%, 13%, 11% and 15% in each of the four successive years. Calculate the geometric mean rise. (4 Marks)
- d) Highlight the two categories of statistics. (3 Marks)
- e) Calculate the mean of the following distribution; (2 Marks)

No. of vehicles serviceable (x)	0	1	2	3	4	5
No. of days (f)	2	5	11	4	4	1

- f) Calculate the harmonic mean of the following data; 1,2,4,5,8,10,10 (5 Marks)
- (4 Marks)

g) Consider the following data set; 9, 3, 4, 2, 1, 5, 8, 4, 7, 3

Find;

- i) Mode (2 Marks)
- ii) 2nd quartile (4 Marks)
- iii) 8thdecile (2 Marks)
- iv) 70th percentile (2 Marks)

QUESTION TWO (20 MARKS)

The dean in the school of business wishes to determine the number of hours students taking bridging study. He selects a random sample of 40 students and records the number of hours each student studies per week as follows;

15.0	23.7	19.7	15.4	18.3	23.0	17.5	20.8	13.5	20.7
17.4	18.6	12.9	20.3	23.7	21.4	18.3	29.8	17.1	18.9
10.3	26.1	15.7	24.0	17.8	32.8	23.2	24.5	27.1	16.6
9.2	16.5	30.8	29.6	24.6	12.5	21.6	28.4	27.9	22.4

- i) Organize the data into grouped frequency distribution starting with 9.2 (5 Marks)
- ii) Plot a histogram for this data (4 Marks)
- iii) Plot the Ogive curve(on a separate graph) (4 Marks)
- iv) Using (iii) above, estimate;
 - a) Median (3 Marks)
 - b) 3rd quartile (2 Marks)
 - c) 5th decile (2 Marks)

QUESTION THREE (20 MARKS)

The masses in grams of some fruits are given below;

363.7	346.4	377.4	341.0	359.8	361.2	385.7	363.5	354.2	375.3
372.2	364.3	373.3	379.4	351,4	369.5	385.5	365.5	385.5	369.5

- i) Starting with 340, group the data into classes of interval 10. (8 Marks)
- ii) From the obtained frequency table, and using a suitable assumed mean; Calculate;
- a) Mean (6 Marks)
- b) Standard deviation (6 Marks)

QUESTION FOUR (20 MARKS)

A sample of 2312 people from a certain national hospital in Nairobi were diagnosed with various diseases as their cause of death as follows;

Heart diseases	Cancer	Stroke	Pulmonary diseases	Accidents	Others
738	538	158	103	93	682

- i) Draw a pie chart representing the following information (12 Marks)
- ii) Draw a bar graph using this information. (8 Marks)

QUESTION FIVE (20 MARKS)

- a) A certain MCA in Nairobi county has 3 house girls who he pays Ksh.2000 per month each, two watchmen who receive KSh.2500 per month each and some gardeners who he pays Ksh.3500 each. If he pays out an average of Ksh.2850 per month to these people, find the number of gardeners. (5 Marks)
- b) Given 3,6,9,3,10,7,12,1,13,15,6,5 find;
- i) Mean (2 Marks)
- ii) Interquartile range (8 Marks)
- iii) Mean absolute deviation (5 Marks)