



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2009/2010

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN FOODS, NUTRITION AND DIETETICS

HFN 321: INTRODUCTION TO STATISTICS

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DATE: TUESDAY 22ND DECEMBER 2009

TIME: 2.00 P.M. – 4.00 P.M.

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INSTRUCTIONS

Answer All the questions.

1. The data shows the weight of 28 pregnant mothers in a community that was involved in a research.

42, 52, 78 45, 59, 84, 41, 77, 54, 81, 83, 50, 73, 43, 57, 70, 91, 90, 74, 89, 75, 61, 66, 77, 86, 49, 51, 67.

- i) Using 7 classes, draw a frequency distribution table. (6 marks)
- ii) Calculate
 - a) Range (2 marks)
 - b) Class limit (2 marks)
 - c) Class interval (2 marks)
 - d) Mean (4 marks)
 - e) Medium (4 marks)
 - f) Mode (4 marks)
 - g) Standard deviation (6 marks)

2. The average amount of meals consumed per day among children under five is 3.6 . A research was done for 15 children form a slum. The mean of the number of meals consumed was 3.1 and Standard deviation = 0.02.

Determine if there is a significant difference between the population mean and the study mean at 95% confidence level. (14 marks)

3. Given the following values,
34, 49, 39, 61, 47, 32, 42
Calculate if the largest value is an outlier at 95% confidence level. (10 marks)

4. The table shows the number of meals consumed by the mother in the last trimester of pregnancy and the respective birth weight for their children.

Number of meals consumed	Birth weight of the children
6	3
4	4
2	5
4	1
3	2
5	4
5	5

- a) Calculate the product moment correlation coefficient (r) and describe the direction and magnitude of the relationship between the number of meals consumed and the birth weight for the children. (12 marks)
- b) Calculate the percentage contribution of the number of meals consumed to the birth weight of the children. (4 marks)