



1st SEM. 2007/2008

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BSc. in Agricultural Economics and Agribusiness
Management Year II
BSc. in Agricultural Education Year II
BSc. in Agronomy Year II
BSc. in Animal Science Year II
BSc. in Food Science, Nutrition and Technology Year II
BSc. in Home Economics Year II
BSc. in Home Economics Education Year II
BSc. in Horticulture Year II
BSc. in Land and Water Management Year II
BSc. in Textiles Apparel Design and Management Year II

COURSE CODE: AEM 201

TITLE OF PAPER: Elementary statistics.

TIME ALLOWED: 2:00 Hours

INSTRUCTION: 1. ANSWER ANY 4(four) QUESTIONS
2. each questions carries 25 marks.

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GRANTED BY THE CHIEF INVIGILATOR**

Question 1

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a. What is statistics?

b. State which of the following represents discrete data and which represents continuous data?

i) Number of millimeters of rainfall in a city during various months of the year. _____

ii) Speed of an automobile in kilometer per hour. _____

ii) Student enrollment in a university over a number of years.

Question 2

The inner diameters of washers produced by the company can be measured to the nearest hundredths of a millimeters.

If the class marks of a frequency distribution of these diameters are given in millimeters by 8.15, 8.22, 8.29, 8.36, 8.43, and 8.5.

Find

i) the class interval size.

ii) the class boundaries. .

Question 3

The following distribution gives the number of maize bags produced by farmers in a particular area of Swaziland.

Number of maize Bags produced	Number of Farmers
1 - 49	75
50 - 99	145
100 - 149	132
150 - 199	64
200 - 249	38
250 - 299	25
300 - 449	14
450 - 599	11

Calculate:

- a) the arithmetic mean, the modal value and the median value.
- b) variance and the standard deviation of the distribution.

Question 4

- a. Find the i) arithmetic mean
ii) geometric mean.
iii) harmonic mean of the numbers 3,4,5,8.
- b. The following table shows the respective weights X and Y of a sample of 12 babies and their oldest brothers.
- Construct a scatter diagram.
 - Find the least-squares regression line of Y on X.
 - find the coefficient of correlation.

Weight X of baby(kg)	3	2	4	5	6	4	5	6	7	8	9	10
Weight Y of brother(kg)	6	6	7	8	10	7	8	11	5	10	12	13

Question 5

- a. A die is rolled once as an experiment,. with $S = (1,2,3,4,5,6)$
Under the assumption that the die is normal,
find the probabilities of the following events.
- 1 or 6
 - An even number
 - A number less than 4
 - An even number and a number less than 4.
- b.. Find the probability that in tossing a fair coin three times there will appear
- 3 heads
 - 2 heads and 1 tail