

11 OCT 2014

Eastern University, Sri Lanka
Second Year First Semester Examination in Agriculture- 2006/2007
(June-2014) (Repeat)

External Degree
CSC 2103 Introductory Statistics

Time: 2 hours

Answer all questions

1) The following table summarizes the weight in kilograms of 250 boys.

Weight (kg)	Number of boys
44.0- 47.9	03
48.0-51.9	17
52.0-55.9	50
56.0-57.9	45
58.0-59.9	46
60.0-63.9	57
64.0-67.9	23
68.0-71.9	09

- Find values for class marks and class boundaries of all classes.
- Draw a histogram and frequency polygon.
- Calculate mean and median for this distribution.

2) a) Briefly explain the simple linear correlation with suitable graphs

- Compute the range, mean deviation, standard deviation and variance for the following data set.

32, 35, 38, 33, 54, 66, 45, 55, 60 and 49

3) The relationship between weight gain and temperature was determined for an insect.

Temp °C	6	8	10	12	14	16	18	20	22	24	26	28
Weight in mg	10	10	9	5	7	4	1	2	1	2	1	0

$$\sum x = 204 \quad \sum y = 52 \quad \sum xy = 606 \quad \sum x^2 = 4040 \quad \sum y^2 = 382$$

- Indicate the dependent and independent variables.
- Draw a scatter diagram.
- Calculate the coefficient of correlation and test its significance.
- Comment on the results.

4) In an experiment each of 100 g soil sample A, B, C, D were dried ^{and} to determine the water holding capacity of four soil. The following readings were recorded in a complete random manner.

Soil A	Soil B	Soil C	Soil D
13	8	10	16
13	10	11	8
11	4	9	15
12	8	4	10
9	6	11	8
10	7	6	10

- Determine the sample mean for different soil.
- Construct ANOVA table for this result
- Interpret the result at 5% significant level