KERALA AGRICULTURAL UNIVERSITY

B.Sc. (Ag) 2003 Admission - V Semester Final Examination

July/August 2006

Stat 302

Statistical Methods (1+1)

Max. Marks: 60

Time: 2 hours

I. Answer the following (20 X 0.5 = 10)

1. A population may be hypothetical (TRUE / FALSE)
2. List of all units in the population is known as a _____
3. The population constants are indicated by _____
4. The range of coefficient of determination is _____
5. The observed data given as such is known as _____ data.
6. The number of grains per panicle is a _____ variable.
7. A two way table containing two quantitative variables is called as _____ table.
8. "More than 100" is an open ended class (TRUE / FALSE)
9. Normal distribution is also known as _____ distribution.
10. The mode for the values 5,8,3,10,9 is _____
11. The range when the minimum and maximum values are –20 and 10 is _____
12. The degrees of freedom for a 2X2 contingency table is one (TRUE / FALSE)
13. Alpha denotes the probability of _____ error.
14. For a symmetrical distribution kurtosis is _____
15. Skewness value may be positive or negative (TRUE / FALSE)
16. In component bar diagram the height of the bars will be _____
17. The mean squares due to regression is also known as explained mean squares (TRUE / FALSE)
18. Standard deviation is affected by extreme values (TRUE / FALSE)
19. Coefficient of variation is expressed in percentages (TRUE / FALSE)
20. In simple random sampling the population should be homogenous (TRUE / FALSE)

II. Answer the following (6 X 1 = 6)

1. What is a reporting unit?
2. Explain variance and covariance.
3. Furnish the probability density function of normal distribution.
4. What is perfect positive correlation?
5. State the parameters of binomial distribution.
6. When the distribution is symmetrical?

III. Answer any SIX of the following (6 X 2 = 12)

1. How to select samples in systematic sampling method?
2. Explain the difference between non-coverage and non-response error?
3. When the binomial distribution approaches Poisson distribution?

4. Explain Type I and Type II errors. What is their relationship?
5. State the applications of F distribution.
6. What is a sampling distribution?
7. State the relationship between t and F distributions.
8. What is meant by negative correlation?

IV. Answer any FOUR of the following (4 X 3 = 12)

1. How to calculate median in case of grouped data?
2. Explain Yates' correction for continuity.
3. Explain how to fit a simple linear regression equation of y on x.
4. What are the properties of correlation coefficient?
5. Compare cluster sampling and multistage sampling.
6. Explain the various stages of conducting a sample survey.

V. Answer any FOUR of the following (4 X 5 = 20)

1. Explain the steps involved in testing of hypothesis.
2. Explain the different diagrammatic representation of data.
3. Explain the steps involved in calculating the correlation coefficient?
4. Explain how to calculate coefficient of variation for raw data.
5. How to estimate mean and variance in simple random sampling.