



Basc.3110

KERALA AGRICULTURAL UNIVERSITY  
B.Tech.(Food Engg.) 2015 Admission  
V Semester Final Examination-January-2018

Statistics (1+1)

Marks: 50

Time: 2 hours

(10x1=10)

**I Match the Following**

- |   |                          |   |  |
|---|--------------------------|---|--|
| 1 | Correlation Coefficient  | a | Repetition of treatment                                  |
| 2 | Chi- Square test         | b | Consistency of data                                      |
| 3 | Standard Error           | c | Independence of attribute                                |
| 4 | Replication              | d | Standard deviation of sampling distribution of statistic |
| 5 | Coefficient of variation | e | Measure of relationship                                  |

**State True or False**

- 6 Professor R.A. Fisher is referred as a father of Statistics.
- 7 Calculation of satisfactory average should be based on all observations.
- 8 Standard deviation is a measure of central tendency.
- 9 The total probability (p) is always equal to one.
- 10 Statistical constants computed from sample values are known as parameters.

**II Write Short notes on ANY FIVE of the following (5x2=10)**

- 1 If mode of the data is 18 and mean is 24 then what is the value of median for the data?
- 2 What are the characteristics of good average?
- 3 Write properties of correlation coefficient.
- 4 Define Type-I and Type-II error.
- 5 If three coins are tossed, what is the probability of getting neither 3 heads nor 3 tails?
- 6 What is control chart?
- 7 Write the applications of Completely Randomized Design.

**III Answer ANY FIVE of the following (5x4=20)**

- 1 Write probability mass functions of Binomial and Poisson distributions. Give the examples of Binomial and Poisson variates.
- 2 Define Normal Distribution. Write its properties.
- 3 Write applications of Chi-Square test.
- 4 Explain the test procedure for testing the significance of means of two independent samples.
- 5 Derive the equation of regression line of Y on X.
- 6 What do you understand by 'Design of Experiments'? Write three basic principles of Design of Experiments.
- 7 Define Statistical Quality Control. Write the uses of X-bar and R charts.

**IV Write an essay on ANY ONE of the following (1x10=10)**

- 1 Write Analysis of Variance of Completely Randomized Design.
- 2 Write Analysis of Variance of Randomized Complete Block Design.

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