

End Semester/Reappear (Semester III) Examination December 2022

Programme: B. Sc. (Hons.) Agriculture

Course: Statistical Methods

Course Code: 13A.215

Enrollment No: _____

Full Marks: 50

Time: 2 Hrs.

Section I

1. Short Answer type questions. Answer any four.

4 x 5 = 20

- a. Two dice are thrown simultaneously. Find the probability of getting “a total of at least 10”.
- b. The mean and variance of 7 observations are 8 and 16 respectively. If 5 of the observations are 2, 4, 10, 12, and 14 then find the remaining two observation.
- c. Define correlation and linear regression with example.
- d. Write down the format of the ANOVA table for two- way factor theory.
- e. Define chi- square test and uses of chi- square test.
- f. Define Sampling Methods of Probability with one example.

Section II

Long answer type questions. Answer any two.

2 x 15 = 30

2. Define Binomial & Poission distribution with example and prove that poission distribution is a limiting case of Binomial distribution.
3. Write the properties of Karl- Pearson’s coefficient of correlation also using it’s direct method calculate the coefficient of correlation of the following data.

X	2	3	4	5	6	7	8
Y	4	7	8	9	10	14	10

4. Answer any three.

- (a) Level of Significance
- (b) Difference between null hypothesis and alternative hypothesis
- (c) Definition of probability
- (d) Coefficient of Contingency table
- (e) Differentiate between the mean, the median and the mode.

5. What is dispersion? In a study to test the effectiveness of a new variety of wheat, an experiment was performed with 50 experimental field and the following result were found:

Yield (per hectare) (in quintals)	Number of fields
31-35	2
36-40	3
41-45	8
46-50	12
51-55	16
56-60	5
61-65	2
66-70	2

The mean yield per hectare in 50 quintals. Determine the variance and standard deviation of the above distribution.