KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Ag.
One-Time Re-examination- April-2018
2014 Admission VII Semester
Basic Statistics (1+1)

I

Choose the correct answer

1. A perpendicular to the X-axis from the point of intersection of the less than and greater than ogives, gives
   a) Median, b) Mode, c) Arithmetic Mean, d) Geometric Mean

2. The average most affected by extreme observations is
   a) Mode, b) Arithmetic Mean, c) Geometric Mean, d) Median

3. A data set contains the observations 10, 12, 8, 14, 15, 7, 17, 20. What is the range?
   a) 8, b) 9, c) 10, d) 13

4. The coefficient of variation of a data set is 20% and the variance is 16. What is the mean?
   a) 4, b) 20, c) 25, d) 80

5. When the coefficient of skewness is zero, the distribution is
   a) U-shaped, b) L-shaped, c) Bell shaped, d) S-shaped

6. The mean of a poisson distribution is 9. The standard deviation is
   a) 9, b) 3, c) 4.5, d) 1

7. A sample is defined as a small sample if its size is
   a) greater than 30, b) less than 30, c) equal to 10, d) less than 50

8. Equality of Variances of two normal populations is tested using
   a) Z-test, b) t-test, c) chi-square test, d) F-test

9. In testing the independence of two attributes in a r x c contingency table, the degrees of freedom for chi-square will be
   a) r+c, b) r+c -1, c) (r-1)(c -1), d) r -c -1

10. The range of correlation coefficient is from
    a) 0 to 1, b) -1 to +1, c) -3 to +3, d) -1 to 0

II

Write Short notes on ANY FIVE of the following

1. Frequency distribution
2. Coefficient of variation and Coefficient of correlation.
3. Scatter diagram
4. Addition and multiplication theorems on probability.
5. Sampling error and non-sampling error.
6. Student’s t-test
7. Analysis of Variance

Marks: 50
Time: 2 hours
(10x1=10)
(5x2=10)
III Answer ANY FIVE of the following (5x4=20)
1 Write a brief note on the important diagrams used for presenting statistical data.
2 Explain the concepts of correlation and regression citing suitable example
3 Distinguish between stratified sampling and cluster sampling.
4 Give the mathematical, statistical and axiomatic definitions of probability.
5 Distinguish between Binomial and Poisson distributions.
6 Describe the steps in testing a statistical hypothesis.
7 Explain Chi-square test for goodness of fit and independence.

IV Write an essay on ANY ONE of the following (1x10=10)
1 Explain the concept of measures of central tendency, dispersion, skewness and kurtosis. How do they help in understanding the characteristics of a data set. Discuss the important measures in each category.
2 Define Normal distribution. What are its properties. Explain the importance and applications of this distribution in Statistics.