KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. 2013 Admission

II nd Semester Final Examination- August-2014

Cat. No: Stat.1201 **Marks: 50**

Title: Basic statistics (1+1) **Time: 2 hours**

I) State True or False **(10 x 1=10)**

1. Correlation coefficient is not affected by change of scale and change in origin
2. Median cannot be calculated from an open-end class frequency distributions
3. For any set of data ,arithmetic mean ,geometric mean and harmonic mean are in ascending order of magnitude
4. The point of intersection of two ogives is mode
5. Quartile Deviation measures variance of extreme 50% observations

Fill Up the Blanks

6. If the standard deviation of the observations 15,45,30,18,20,50 is 13.5 then the standard deviation of three times of each observation is_____
7. In a symmetric distribution ,mean,median and mode are_____
8. Maximum probability of rejecting a true hypothesis is known as _____
9. If the correlation coefficient is 0.8 ,then coefficient of determination is_____

Name the Following

10. Name the probability distribution whose mean and variance are same

II Write short notes on any FIVE **(5 x 2=10)**

1. Discuss the importance of standard deviation and coefficient of variation using examples
2. What is the difference between skewness and kurtosis.What are the different types of skewness and kurtosis
3. Discuss different one dimensional diagrams
4. Explain the test statistic for testing significance of two sample correlation coefficients (r1and r2) based on sample of sizes ' n1 and n2'
5. What is the difference between median ,quartiles ,deciles and percentiles
6. Define a standard normal variate. Write down its probability density function
7. What are positive and negative correlations. How will you decide the correlation as positive and negative based on scatter diagram

III Write short essays on any FIVE of the following **(5 x 4=20)**

1. How does regression analysis is different from correlation analysis .Explain the procedure of fitting a linear regression equation y= a+b x to the given data
2. Write the null hypothesis and test statistic of any two large sample tests

3. What are the uses of **t** test .Explain the procedure of testing the equality of two independent small sample means
4. Define a chi-square variate. What are its uses in the field of agriculture .Describe the procedure of testing independence of attributes in 2 x 2 contingency table. Also mention about Yate's correction for continuity
5. Define binomial probability distribution and state its properties
6. Explain different graphical representation of frequency distribution
7. What is meant by sampling distribution and standard error? Explain the importance of standard error in statistical inference

IV Write essay on ANY ONE **(1 x 10=10)**

1. Describe various measures of averages and their properties. Also explain their merits and demerits
2. List out different methods of probability sampling .Explain the procedure of selection of a random sample of size by using simple random sampling and stratified random sampling method. Also provide estimate for sample mean in both methods

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