KERALA AGRICULTURAL UNIVERSITY
B.Tech (Agrl. Engg) 2013 Admission
Vth Semester Final Examination - January-2016

Cat. No: Stat.3501
Title: Statistics (1+1)

Marks: 50.00
Time: 2 hours

I Answer the following
(10 x 1=10)

1. Define arithmetic mean

2. What is statistical hypothesis

3. What area the different types of errors in testing of hypothesis

4. Range is a method of measuring_____

5. The calculated values of X^2 is always _____

6. μ and σ^2 are the parameters of the _____distribution

7. In symmetrical distribution, mean=median =mode. State whether true or false

Match the following

8. Relative measure of dispersion   a) Leptokurtic

9. β_2 is greater than 3   b) r =1

10. Two regression lines coincides   c) Coefficient of variation

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

1. What are random variables? Give examples

2. Write the properties of t- distribution

3. Find the mean of binomial distribution

4. Explain the terms mutually exclusive and equally likely .Give examples

5. The life time of a certain kind of battery has a mean of 300 hours and a standard deviation of 35 hours .Assuming that distribution of lifetimes , which are measured to the nearest hour , is normal , find the percentage of batteries which have lifetime of more than 370 hours

6. What are the characteristics of dispersion

7. Write the properties of normal curve

III Write short essay on any FIVE questions
(5 x 4=20)

1. Express the Poisson distribution as a limiting form of Binomial distribution.

2. Explain any three types of correlation

3. Explain the uses of Chi Square distribution in statistical analysis

4. 35 determinations of thermal conductivity of a certain kind of brick yielded an average value of 0.343 .Test the hypothesis that the thermal conductivity of such a brick is 0.340 at 0.05 level of significance assuming the variability of such determinations is 0.01

5. From the following find out the mean profits

Profit per shop Rs.	Numbers of shops
100-200	10
200-300	18
300-400	20
400-500	26
500-600	30
600-700	28
700-800	18

6. Write the merits and demerits of median

7. Find the coefficient of skewness from the following data:

Size	:	3	4	5	6	7	8	9	10
Frequency	:	7	10	14	35	102	136	43	8

IV Write essay on any ONE (1 x 1=10)

1. Fit a normal distribution to the following data and test the goodness of fit at 5% level of significance

X:	4	6	8	10	12	14	16	18	20	22	24
Freq:	1	7	15	22	35	43	38	20	13	5	1

2. The following data relate to the age of a group of workers .Calculate the arithmetic mean and standard deviation

Age:	20-25	25-30	30-35	35-40	40-45	45-50	50-55
No. of workers:	170	110	80	45	40	30	20