



KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Food Engg. & Tech.) 2018 Admission

V Semester Final Examination-February 2021

Basc 3110

Statistics (1+1)

Marks:50
Time: 2hours

I Fill in the blanks:

(10x1=10)

- The alternative hypothesis is also called as _____.
 - A failing student is passed by an examiner; it is an example of _____.
- Choose the correct answer**
- Interviewing all members of a given population is called:
a) A sample
b) A Gallup poll
c) A census
d) A Nielsen audit.
 - The test used for testing association between the attributes is
a) Chi-Square test
b) t test
c) F test
d) ANOVA
 - Which of the following is defined as the rule or formula to test a Null Hypothesis
a) Test statistic
b) Population statistic
c) Variance statistic
d) Null statistic
 - The _____ sum of squares measures the variability of the sample treatment means around the overall mean.
a) treatment
b) error
c) interaction
d) total
 - Analysis of variance is a statistical method of comparing the _____ of several populations.
a) Standard deviations
b) Variances
c) Means
d) Proportions
 - Suppose a person has 8 red, 5 green, 12 orange and 15 blue balls. Test the null hypothesis that the colours of the balls occur with equal frequency. What is the Chi-Square value you get?
a) 5.6
b) 5.68
c) 5.86
d) 5.8
 - The point where the Null Hypothesis gets rejected is called as:
a) Significant Value
b) Rejection Value
c) Acceptance Value
d) Critical value
 - Correlation coefficient ranges from:
a) 0 to 1
b) -1 to +1
c) $-\infty$ to $+\infty$
d) 0 to $+\infty$

II Write Short notes on ANY FIVE of the following

(5x2=10)

- What is alternative hypothesis?
- A dice is tossed 120 times with the following results

No. turned up	1	2	3	4	5	6
Frequency	30	25	18	10	22	15

Test the hypothesis that the dice is unbiased. Calculate the Test statistics for Chi-Square Test.

- What is F distribution?
- Define Statistics.

5. What is the use of ANOVA?
6. What is Kurtosis?
7. Define Poisson distribution.

III Answer ANY FIVE of the following

(5x4=20)

1. What is Pearson's Correlation coefficient?
2. Explain the concept of quality control.
3. Write a note on student t-distribution.
4. Enumerate the method of simple linear regression.
5. Write the concept of standard error of mean.
6. How to perform the fitting of normal distribution?
7. A problem in mathematics is given to three students A, B and C. If the probability of A solving the problem is $\frac{1}{2}$ and B not solving it is $\frac{1}{4}$. The whole probability of the problem being solved is $\frac{63}{64}$, then what is the probability of C solving it?

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Describe the estimation of hazard rate and mean time to failure in detail with examples.
2. Explain in detail about the control chart – R charts with suitable examples.
