Project: Batch DS2402

Assignment: Worksheet Set 2

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STATISTICS

WORKSHEET-5

Q1 to Q10 are MCQs with only one correct answer. Choose the correct option.

1. Using a goodness of fit,we can assess whether a set of obtained frequencies differ from a set of frequencies.
a) Mean
b) Actual
c) Predicted
d) Expected

Answer : d) Expected -

Using expected goodness fit method, we can assess whether a set of obtained frequencies differs from a set of expected frequencies. In statistics, - a goodness-of-fit test is a statistical test of the hypothesis that the observed frequency distribution of a categorical variable matches the expected frequency distribution.

2. Chisquare is used to analyse
a) Score
b) Rank
c) Frequencies
d) All of these

Answer : c) Frequencies -

The chi-square test is commonly used to analyze the association between categorical variables by comparing observed frequencies with expected frequencies. It helps in determining whether there is a significant difference between the observed and expected frequencies in a contingency table.

3. What is the mean of a Chi Square distribution with 6 degrees of freedom?
a) 4
b) 12
c) 6
d) 8

Answer : c) 6 - The mean of a chi-square distribution with k degrees of freedom is equal to k. So, in this case, the mean of a chi-square distribution with 6 degrees of freedom would be 6.

4. Which of these distributions is used for a goodness of fit testing?
a) Normal distribution

b) Chisqared distribution
c) Gamma distribution
d) Poission distribution

Answer : b) Chisqared distribution- This distribution is used to test whether an observed frequency distribution differs from a theoretical or expected frequency distribution.-

5. Which of the following distributions is Continuous
a) Binomial Distribution
b) Hypergeometric Distribution
c) F Distribution
d) Poisson Distribution

Answer : c) F Distribution - The F distribution is a continuous probability distribution used in statistics. It arises frequently as the null distribution of a test statistic, most notably in the analysis of variance (ANOVA).

6. A statement made about a population for testing purpose is called?
a) Statistic
b) Hypothesis
c) Level of Significance
d) TestStatistic

Answer : b) Hypothesis

7. If the assumed hypothesis is tested for rejection considering it to be true is called?
a) Null Hypothesis
b) Statistical Hypothesis
c) Simple Hypothesis
d) Composite Hypothesis

Answer : a) Null Hypothesis - The statement made about a population for testing purposes, which is tested for rejection while considering it to be true, is called the "Null Hypothesis."

8. If the Critical region is evenly distributed then the test is referred as?
a) Two tailed
b) One tailed
c) Three tailed
d) Zero tailed

Answer : a) Two tailed - In such tests, the researcher is interested in whether the sample mean significantly differs from the population mean in either direction (either greater than or less than).

9. Alternative Hypothesis is also called as?
a) Composite hypothesis
b) Research Hypothesis
c) Simple Hypothesis
d) Null Hypothesis

Answer : b) Research Hypothesis - The Alternative Hypothesis is also referred to as the Research Hypothesis. It is the hypothesis that researchers are trying to provide evidence for, typically by rejecting the null hypothesis.

10. In a Binomial Distribution, if ‘n’ is the number of trials and ‘p’ is the probability of success, then the mean value is given by

a) np

b) n

Answer : a) np