STATISTICS WORKSHEET-3

Question-1 Which of the following is the correct formula for total variation?

a) Total Variation = Residual Variation – Regression Variation

b) Total Variation = Residual Variation + Regression Variation

c) Total Variation = Residual Variation * Regression Variation

d) All of the mentioned

Answer- b) Total Variation = Residual Variation + Regression Variation

Question-2 Collection of exchangeable binary outcomes for the same covariate data are called outcomes.

a) random

b) direct

c) binomial

d) none of the mentioned

Answer- c) binomial

Question-3 How many outcomes are possible with Bernoulli trial?

a) 2

b) 3

c) 4

d) None of the mentioned

Answer- a) 2

Question -4 If Ho is true and we reject it is called

a) Type-I error

b) Type-II error

c) Standard error

d) Sampling error

Answer - a) Type-I error

Question-5 Level of significance is also called:

a) Power of the test

b) Size of the test

c) Level of confidence

d) Confidence coefficient

Answer- b) Size of the test

Question-6 The chance of rejecting a true hypothesis decreases when sample size is:

a) Decrease

b) Increase

c) Both of them

d) None

Answer- b) Increase

Question-7 Which of the following testing is concerned with making decisions using data?

a) Probability

b) Hypothesis

c) Causal

d) None of the mentioned

Answer - b) Hypothesis

Question-8 What is the purpose of multiple testing in statistical inference?

a) Minimize errors

b) Minimize false positives

c) Minimize false negatives

d) All of the mentioned

Answer- d) All of the mentioned

Question-9 Normalized data are centred at and have units equal to standard deviations of the original data

a) 0

b) 5

c) 1

d) 10

Answer- a) 0

Question- 10 What Is Bayes' Theorem?

Answer – Bayes' Theorem states that the conditional probability of an event, based on the occurrence of another event, is equal to the likelihood of the second event given the first event multiplied by the probability of the first event.

Question- 11 What is z-score?

Answer- A z-score is an example of a standardized score. A z-score measures how many standard deviations a data point is form the mean in a distribution.

Question-12 What is t-test?

Answer- A t-test is an inferential statistic used to determine if there is a significant difference between the means of two groups and how they are related. T-tests are used when the data sets follow a normal distribution and gave unknown variance, like the data set recorded from flipping a coin 100 times.

The t-test is a test used for hypothesis testing in statistic and uses the t-statistic, the t-distribution values, and the degrees of freedom to determine statistical significance.

Question-13 What is percentile?

Answer- A value on a scale of one hundred that indicate the percent of a distribution that is equal to or below it. A percentile score of 95 is a score equal to or better than 95 percent of the scores.

Question-14 What is ANOVA?

Answer- ANOVA is to test for differences among the means of the population by examining the amount of variation within each sample, relative to the amount of variation between the samples. Analyzing variance tests the hypothesis that the means of two or more populations are equal.

Question-15 How can ANOVA help?

Answer- ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-test. However, it results in fewer type I error and is appropriate for a range of issue. ANOVA groups difference by comparing the means of each group and includes spreading out the variance into diverse sources.