STATISTICS WORKSHEET-3

Q1 to Q9 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following is the correct formula for total variation?
Ans) b) Total Variation = Residual Variation + Regression Variation

2. Collection of exchangeable binary outcomes for the same covariate data are called --- outcomes.
Ans) c) binomial

3. How many outcomes are possible with Bernoulli trial?
Ans) a) 2

4. If Ho is true and we reject it is called
Ans) a) Type-I error

5. Level of significance is also called:
Ans) c) Level of confidence

6. The chance of rejecting a true hypothesis decreases when sample size is:
Ans) b) Increase

7. Which of the following testing is concerned with making decisions using data?
Ans) b) Hypothesis

8. What is the purpose of multiple testing in statistical inference?
Ans) d) All of the mentioned

9. Normalized data are centred at and have units equal to standard deviations of the original data
Ans) a) 0

Q10and Q15 are subjective answer type questions, Answer them in your own words briefly.

10. What Is Bayes' Theorem?
Bayes theorem is a mathematical formula, which is used to determine the conditional probability of the given 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.

11. What is z-score?
The z-score is the signed number of standard deviation by which the value of an observation or data point is above the mean value of what is being observed or measured.

12. What is t-test?
It is used to determine if there is a significant difference between the means of two groups or samples, which may be related in certain features.

13. What is percentile?
Percentile is a number/value where a certain percentage of scores/data fall below that given number/value. For example, if you score 75 points on a test, and are ranked in the 85 th percentile, it means that the score 75 is higher than 85% of the scores.

14. What is ANOVA?
Analysis of variance (ANOVA) is a statistical procedure used to test the degree to which two or more groups vary in an experiment.

15. How can ANOVA help?
It helps to find out whether the difference between groups of data are statistically significant. We can use ANOVA to figure out how your various groups react, with the null hypothesis being that the means of the various groups are equal. If the difference between the two populations is statistically significant, then the two populations are unequal.