

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?

- 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

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

3. How many outcomes are possible with Bernoulli trial?

- a) 2**
- b) 3
- c) 4
- d) None of the mentioned

4. If H_0 is true and we reject it is called

- a) Type-I error**
- b) Type-II error
- c) Standard error
- d) Sampling error

5. Level of significance is also called:

- a) Power of the test
- b) Size of the test**
- c) Level of confidence
- d) Confidence coefficient

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

- a) Decrease
- b) Increase**
- c) Both of them
- d) None

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

a) Probability

b) Hypothesis

c) Causal

d) None of the mentioned

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

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

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

10. What Is Bayes' Theorem?

Ans:- Bayes' Theorem describes of occurrence of an event related to any condition. It is used in the case of conditional probability.

11. What is z-score?

Ans:- Z-score is also called standard score. Z-score is measured in terms of standard deviations from the Mean score.

12. What is t-test?

Ans:- A T-test is a statistical test that compares the means of two snmples. It is used in Hypothesis testing.

13. What is percentile?

Ans:- Percentile is a value is number that represents a precentage position on a range of list of data.The person or thing at that number in percentage.

14. What is ANOVA?

Ans:- Analysis of Variance(ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other.

15. How can ANOVA help ?

Ans:- ANOVA helps in hypothesis testing it enables the comparison of independent and dependent variables.