STATISTICS WORKSHEET-3

1. b

2. c

3. a

4. a

5. b

6. a

7. a

8. d

9. a

10. **What Is Bayes' Theorem?**

Bayes' theorem describes the probability of occurrence of an event related to any condition. It is also considered for the case of conditional probability

For example- if we have to calculate the probability of taking a red card from the first bag out of five different bags of cards, where each bag contains three different color card like. red, blue, black. In this case, the probability of occurrence of an event is calculated depending on other conditions is known as conditional probability.

$$P(A|B)=P(B|A)\ P(A)/P(B)$$

11. **What is z-score?**

A z-score measures the distance between a data point and the mean using standard deviations. Z-scores can be positive or negative. The sign tells you whether the observation is above or below the mean. For example, a z-score of +2 indicates that the data point falls two standard deviations above the mean, while a -2 signifies it is two standard deviations below the mean. A z-score of zero equals the mean.

12. **What is t-test?**

A t-test is an inferential statistic used to determine if there is a statistically significant difference between the means of two variables. The t-test is a test used for hypothesis testing in statistics and it can be dependent or independent. Calculating a t-test requires three fundamental data values including the difference between the mean values from each data set, the standard deviation of each group, and the number of data values.

13. **What is percentile?**

Percentiles are used to understand and interpret data. They indicate the values below which a certain percentage of the data in a data set is found.

14. **What is ANOVA?**

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. ANOVA checks the impact of one or more factors by comparing the means of different samples.

15. **How can ANOVA help?**

We use ANOVA test when we have two or more numeric variables. Basically we use it to find out the variance b/w the variables and among the variables.