STATISTICS WORKSHEET-3

1. B
2. C
3. A
4. A
5. D
6. B
7. B
8. D
9. A

10. Bayes theorem is a mathematical formula used to determine the conditional probability of events. The Bayes' theorem describes the probability of an event based on prior knowledge of the conditions that might be relevant to the event. The formula of bays theorem is :

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

The formula can also be used to see how the probability of an event occurring is affected by hypothetical new information, supposing the new information will turn out to be true.

11. Z-score is a statically measures which gives the information about how far are the data point from the mean in terms of standard deviation. . If a Z-score is 0, it indicates that the data point's score is identical to the mean score. Z-scores may be positive or negative, with a positive value indicating the score is above the mean and a negative score indicating it is below the mean.

12. A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups. The larger the t score, the more difference there is between groups. The smaller the t score, the more similarity there is between groups. There are 3 types of t-test

Independent Samples t-test
Paired sample t-test
One sample t-test

13. A percentile (or a centile) is a measure used in statistics indicating the value *below which* a given percentage of observations in a group of observations fall. For example, the 20th percentile is the value (or score) below which 20% of the observations may be found. The 25th percentile is also known as the first quartile (Q1), the 50th percentile as the median or second quartile (Q2), and the 75th percentile as the third quartile (Q3). In general, percentiles and quartiles are specific types of quantiles.

14. 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.ANOVA allow you to determine if differences in mean values between three or more groups are by chance or if they are indeed significantly different. ANOVA makes use of the F-test to determine if the variance in response to the satisfaction questions is large enough to be considered statistically significant. ANOVA is helpful for testing three or more variables. ANOVA is used when one variable is numeric and one is categorical, such as numerical input variables and a classification target variable in a classification task.