STATISTICS WORKSHEET- 6

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

1. Ans-D

2. Ans-A

3. Ans-A

4. Ans-C

5. Ans-C

6. Ans-A

7. Ans-C

8. Ans-B

9. Ans-B

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

10. What is the difference between a boxplot and histogram?

Ans-Boxplots and histograms are graphical representation for frequency of numerical data values.Histograms are preferred to determine the underlying probability distribution of a data.Boxplot are more useful when comparing between several datasets.

11. How to select metrics?

Ans-Key metrics should always be closely tied to your primary objective.Good metrics can be improved.Good metrics measure progress which means there need to be room for improvement.Good metrics inspire action.

12. How do you assess the statistical significance of an insight?

Ans-create a null hypothesis

Create an alternate hypothesis

Determine the significance level

Decide on type of test you need to use

Perform power analysis to find out your sample size

Calculate std deviation

Use std error formula

13. Give examples of data that does not have a Gaussian distribution, nor log-normal.

Ans-poisson distribution

14. Give an example where the median is a better measure than the mean.

Ans-income level research.

Few millionares can make it look like socio economic status of your sample is higher than iit really is.

15. What is the Likelihood?

Ans-Likelihood measures the goodness of fit of a statistical model to a sample of data for given values of unknown parameters. But in both frequentist and Bayesian statistics likelihood function plays a fundamental role