Q1. Option B (Residual Variation+ Regressionvariation)

Q2. Option C (Binomial Outcome)

Q3. Option C(02)

Q4.Option A(type 1 Error)

Q5.Option D(Confidence coefficient)

Q6.Option B(Increase)

Q7.Option B(Hypothesis)

Q8.Option D(All of the above)

Q9. Option A(0)

Q10.Bayes Theorem:

Conditional Probability of an Event based on the occurrence of another event.

A,B =Events

P(A/B)=p(B/A).P(A)/p(B).

Q11.Z Score which is also called as standard score tells you, how far a data point is from the mean of the datapoints.

Z score=x-mean/Std

Z score can be placed on the normal distribution which varies from -3 to +3.

Q12. If We have one or two Samples , ttest can be used.

One Sample:

We should test the sample and get P value.

If P value is greater than Alpha score then we reject the null hypothesis.

St.ttest_1samp(hyp.sample1,mu)

Two samples: we have two Categories, 1.Independent Sample ttest.2.Paired Sample ttest.

1.For Independent Samples we can take example of Gender, to find out pvalue for two independent samples for(Male=0,Female=1)

St.ttest_ind(Sampleof gender=0,sample of gender=1)

2.Paired Simple ttest is used to find the P value of 2 Samples, which is Paired.

St.ttest_rel(Sample1,Sample2)

Q13. Percentile Indicates that the percentage of score that fall below a particular value.

Formula: i=k/100(n+1)

K is the value to find percentile

N is the no of sample

I is the percentile (Percentage)

Q14.ANOVA is a short term for Analysis of Variance.

It is used when there is more than two samples.

Q15. An **ANOVA** test is a way to find out if survey or experiment results are significant. In other words, they help you to figure out if you need to reject the null hypothesis or accept the alternate hypothesis.

Basically, **you're testing groups to see if there's a difference between them.** Examples of when you might want to test different groups:

- A group of psychiatric patients are trying three different therapies: counseling, medication and biofeedback. You want to see if one therapy is better than the others.
- A manufacturer has two different processes to make light bulbs. They want to know if one process is better than the other.
- Students from different colleges take the same exam. You want to see if one college outperforms the other.

One-way or **two-way** refers to the number of independent variables (IVs) in your Analysis of Variance test.

- One-way has one independent variable (with 2 levels). For example: *brand of cereal*,
- Two-way has two independent variables (it can have multiple levels). For example: *brand of cereal, calories*.