STATISTICS WORKSHEET-8

1. In hypothesis testing, type II error is represented by β and the power of the test is 1−β then β is:

b. The probability of failing to reject H0 when H1 is true

2. In hypothesis testing, the hypothesis which is tentatively assumed to be true is called the

a. correct hypothesis

3. When the null hypothesis has been true, but the sample information has resulted in the rejection of the null, a _____ has been made

d. Type I error

4.For finding the p-value when the population standard deviation is unknown, if it is reasonable to assume that the population is normal, we use

b. the t distribution with n - 1 degrees of freedom

5. A Type II error is the error of

a. accepting Ho when it is false

6. A hypothesis test in which rejection of the null hypothesis occurs for values of the point estimator in either tail of the sampling distribution is

d. a two-tailed test

7. In hypothesis testing, the level of significance is

b. the probability of committing a Type I error

8. In hypothesis testing, b is

a. the probability of committing a Type II error

9. When testing the following hypotheses at an α level of significance H0: p = 0.7 H1: p > 0.7 The null hypothesis will be rejected if the test statistic Z is

a. $z > z\alpha$

10. Which of the following does not need to be known in order to compute the P-value?

d. All of the above are needed

11. The maximum probability of a Type I error that the decision maker will tolerate is called the

a. level of significance

12. For t distribution, increasing the sample size, the effect will be on

a. Degrees of Freedom

13. What is Anova in SPSS?

ANOVA in SPSS, is used for examining the differences in the mean values of the dependent variable associated with the effect of the controlled independent variables, after taking into account the influence of the uncontrolled independent variables. Essentially, ANOVA in SPSS is used as the test of means for two or more populations.

14. What are the assumptions of Anova?

Normality

ANOVA assumes that each sample was drawn from a normally distributed population.

Equal Variance

ANOVA assumes that the variances of the populations that the samples come from are equal.

Independence

ANOVA assumes:

- **The observations in each group are independent of the observations in every other group.**
- **The observations within each group were obtained by a random sample**

15. What is the difference between one way Anova and two way Anova?

The key difference between one-way ANOVA and two-way ANOVA is the number of independent variables. In one-way ANOVA, there is only one independent variable, whereas in two-way ANOVA there are two or more independent variables. The number of variables affects the way the data is analyzed.