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:

a. The probability of rejecting H0 when H1 is true

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

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

d. The probability of rejecting H0 when H1 is true

ANS1.'B'

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

a. correct hypothesis

b. null hypothesis

c. alternative hypothesis

d. level of significance

ANS2.'B'

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

\_\_\_\_\_\_\_\_\_ has been made

a. level of significance

b. Type II error

c. critical value

d. Type I error

ANS3.'D'

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

a. the z distribution

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

c. the t distribution with n + 1 degrees of freedom

d. none of the above

5. A Type II error is the error of

a. accepting Ho when it is false

b. accepting Ho when it is true

c. rejecting Ho when it is false

d. rejecting Ho when it is true

ANS5.'A'

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 called

a. the null hypothesis

b. the alternative hypothesis

c. a one-tailed test

d. a two-tailed test

ANS6.'D'

7. In hypothesis testing, the level of significance is

a. the probability of committing a Type II error

b. the probability of committing a Type I error

c. the probability of either a Type I or Type II, depending on the hypothesis to be tested

d. none of the above

ANS7.'A'

8. In hypothesis testing, b is

a. the probability of committing a Type II error

b. the probability of committing a Type I error

c. the probability of either a Type I or Type II, depending on the hypothesis to be test

d. none of the above

ANS8.'A'

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 > zα

b. z < zα

c. z < -z

d. none of the above

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

a. knowledge of whether the test is one-tailed or two-tail

b. the value of the test statistic

c. the level of significance

d. All of the above are needed

ANS10.'A'

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

a. level of significance

b. critical value

c. decision value

d. probability value

ANS11.'A'

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

a. Degrees of Freedom

b. The t-ratio

c. Standard Error of the Means

d. All of the Above

ANS12.'C'

Q13 to Q15 are subjective answers type questions. Answers them in their own words briefly.

13. What is Anova in SPSS?

ANS13.Analysis of Variance (ANOVA), i.e. In SPSS, ANOVA is used to examine variations in the mean values of the dependent variable correlated with the impact of the controlled independent variables after controlling for the effects of the uncontrolled independent variables.

14. What are the assumptions of Anova?

ANS14.(1) interval data of the dependent variable, (2) normality, (3) homoscedasticity, and (4) no multicollinearity

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

ANS15.The only difference between one-way and two-way ANOVA is the number of independent variables. A one-way ANOVA has one independent variable, while a two-way ANOVA has two

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