STATISTICS WORKSHEET-8

Q1 to Q12 have only one correct answer. Choose the correct option to answer your question.

1. In hypothesis testing, type II error is represented by β and the power of the test is 1−β then β is:
] d. The probability of rejecting H0 when H1 is true

2. In hypothesis testing, the hypothesis which is tentatively assumed to be true is called the
b. null 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 called
c. a one-tailed test

7. In hypothesis testing, the level of significance is a. the probability of committing
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?
c. the level of significance

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

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

13. What is Anova in SPSS?
→ Analysis of Variance, i.e. 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.

14. What are the assumptions of Anova?
→ The factorial ANOVA has a several assumptions that need to be fulfilled – (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?
→ 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.