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STATISTICS WORKSHEET-8

1. In hypothesis testing, type II error is represented by β and the power of the test is $1-\beta$ then β is:
a. The probability of rejecting H_0 when H_1 is true
  b.   The probability of failing to reject H_0 when H_1 is true
  c.   The probability of failing to reject H_1 when H_0 is true
  d.   The probability of rejecting H_0 when H_1 is true

 Ans. (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
   Ans.(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
   Ans.(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
   Ans.(b)

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

Ans.(c)

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

Ans.(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

Ans.(b)

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

Ans.(a)

9. When testing the following hypotheses at an α level of significance

H_0: p = 0.7

H_1: p > 0.7

The null hypothesis will be rejected if the test statistic Z is

a. $z > z_\alpha$

b. $z < z_\alpha$

c. $z < -z$

d. All of the above are needed

Ans. C

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

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b the value of the test statistic

c   the level of significance

d   All of the above are needed

Ans.(c)

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 Ans.(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 Ans.(d)

13. What is Anova in SPSS?

Ans. 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?
 Ans. There are three primary assumptions in ANOVA:

   • The responses for each factor level have a normal population distribution.
   • These distributions have the same variance.
   • The data are independent.

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