

## Workshop 6

### Hypothesis Testing (Multiple Choice Quiz)

Name: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Select the best answer for each question.

Question 1

Testing a specific hypothesis

- a. proves or disproves the conjecture.
- b. supports or refutes the tenability of the conjecture.
- c. indicates causality.
- d. both *a* and *b* are true.

Question 2

The null hypothesis is the hypothesis that

- a. there is no difference
- b. there is a difference
- c. there may be a difference.
- d. none of the above.

Question 3

Concerning one or more population parameters, a hypothesis is

- a. a statement that is true and accurate.
- b. a statement of proof.
- c. a statement that is assumed to be false.
- d. a statement of conjecture.

Question 4

Another name for a research hypothesis is

- a. a null hypothesis.
- b. an alternate hypothesis.
- c. a sample distribution.
- d. the test hypothesis.

Question 5

A Type I error occurs when

- a. a true hypothesis is rejected.
- b. a true hypothesis is not rejected.
- c. a false hypothesis is rejected.
- d. a false hypothesis is not rejected.

Question 6

Before testing a hypothesis, which of the following is not a consideration?

- a. Errors in hypothesis.
- b. The level of significance.
- c. The region of rejection.
- d. None of the above.

## Question 7

The most serious error is

- a. Type I.
- b. Type II.
- c. It depends on the situation.
- d. Both errors are equally serious.

## Question 8

When testing a null hypothesis, the level of significance is the probability that

- a. a true hypothesis is rejected.
- b. a true hypothesis is not rejected.
- c. a false hypothesis is rejected.
- d. a false hypothesis is not rejected.

## Question 9

The critical values of a test statistics are those values in the sampling distribution that are

- a. inside the region of rejection.
- b. outside the region of rejection.
- c. the beginning of the region of rejection.
- d. the outer tail of the region of rejection.

## Question 10

When the alternate hypothesis is non-directional, the test is called a

- a. one-tailed test.
- b. two-tailed test
- c. center test.
- d. none of the above.

## Question 11

If the level of significance is 0.01, the chance of making a Type I error is

- a. 99%.
- b. 90%.
- c. 10%.
- d. 1%.

## Question 12

Degrees of freedom are

- a. the number of observations.
- b. the number of restrictions.
- c. the number of observations minus the number of restrictions.
- d. the number of restrictions minus the number of observations.

## Question 13

The standard error is most affected by

- a. the level of significance.
- b. the sample size.
- c. the critical value.
- d. the sampling distribution.

## Question 14

The sample mean is

- a. a point estimate.
- b. an interval estimate.
- c. a confidence interval.
- d. none of the above.

## Question 15

As the sample size increases, the difference between the normal distribution and the corresponding  $t$  distribution

- a. increases.
- b. remains the same.
- c. decreases.
- d. There is no comparison.

## Question 16

The null hypothesis is written in terms of

- a. statistical significance.
- b. expected differences.
- c. population parameters.
- d. the difference between statistics and the corresponding parameters.

## Question 17

The standard error of the mean based on sample data has which sampling distribution?

- a.  $t$
- b.  $z$
- c. Binomial
- d. Factorial

## Question 18

The larger the sample size, the smaller the

- a. test statistics.
- b. level of significance.
- c. statistical power.
- d. standard error of the mean.

## Question 19

When there are 250 degrees of freedom, the  $t$ -distribution is very similar to

- a. the uniform distribution.
- b. the normal distribution.
- c. the population distribution.
- d. the region of rejection.

## Question 20

When the null hypothesis is rejected

- a.  $p < \alpha$ .
- b.  $p > \alpha$ .
- c.  $p > \beta$ .
- d.  $p < \beta$ .

## Question 21

The complement of the level of significance is

- a. an interval estimate.
- b. a confidence interval.
- c. a level of confidence.
- d. a point estimate.

## Question 22

In developing a confidence interval, one is testing

- a. no hypothesis.
- b. one hypothesis.
- c. two hypotheses.
- d. many hypothesis.

## Question 23

If the 0.99 confidence interval ranges from 25.5 to 35.5, which of the following null hypotheses would be rejected with a two-tailed test at the 0.01 level of significance?

- a.  $\mu = 28$
- b.  $\mu = 25$
- c.  $\mu = 35$
- d.  $\mu = 30$

## Question 24

The CI uses

- a. a one-tailed critical value.
- b. a two-tailed critical value.
- c. a one-tailed sample statistics.
- d. a two-tailed sample statistics.

Question 25

The width of the CI depends primarily on

- a. the population mean.
- b. the critical value.
- c. the sample mean.
- d. the sample size.

Some questions taken from: Hinkle D. E., Wiersma, W. and Jurs. S. G. (2003). *Test Bank and Solution Manual: Applied Statistics for the Behavioral Science*, (5th Ed.) Boston, MA: Houghton Mifflin Company.

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