Q1
1 Point

Which of the following is true about the chi-squared distribution?

- (●) It is skewed to the right
- ( ) It can take on negative values
- ( ) Its shape does not depend on the degrees of freedom
- ( ) It is symmetric

Q2
1 Point

What is the main purpose of a chi-squared goodness of fit test?

- (●) To determine if a sample distribution fits a theoretical distribution
- ( ) To compare the variances of two samples
- ( ) To test the correlation between two variables
- ( ) To compare the means of two samples

Q3
1 Point

The chi-squared goodness of fit test is sensitive to:

- ( ) Sample size
- ( ) Choice of significance level
- ( ) Type of data (continuous or discrete)
- (●) Choice of bins

Q4
1 Point

In a chi-squared test, what does a larger value of the test statistic indicate

- ○ The observed frequencies are normally distributed
- ◉ A larger difference between observed and expected frequencies
- ○ A smaller difference between observed and expected frequencies
- ○ A greater alignment between the observed and expected frequencies

Q5
1 Point

What is the primary objective of using chi-square tests to evaluate distributions?

- ○ To calculate the variance of the distribution
- ○ To establish the independence between two variables
- ○ To determine the mean of the distribution
- ◉ To assess if observed data fits a theoretical distribution

Q6
1 Point

Why are degrees of freedom typically one less than the number of categories in a chi-squared test?

- ○ To increase the power of the test
- ○ To account for sample size limitations
- ○ Because one category is always redundant
- ◉ Due to the need for the observed frequencies to sum to the total sample size

Q7
1 Point

How do degrees of freedom affect the shape of the chi-squared distribution?

- ○ They do not affect the shape at all
- ○ Fewer degrees of freedom result in a wider distribution
- ○ More degrees of freedom result in a more skewed distribution
- ◉ More degrees of freedom result in a distribution that is more normal in shape