Econometrics

Lecture 11: Multiple Linear Regression: Problem of Estimation and Inference
Quiz Solutions

1. Which variable is said to be if it is expressed in terms of deviation from its mean and divided by its standard deviation?

a) Standardized b) normal

c.) Continuous d) qualitative

2. If a regression model is not correctly specified, it is called Specification Bias or error.

3. R^2 is a non-decreasing function of the number of explanatory variables. True / False

4. In order to compare, two R^2 values, the size of n and the dependent variable need not be the same. True / False

5. Mention any two forms of hypothesis testing.
Testing those two or more coefficients are equal to one another
Testing that the partial regression coefficients satisfy certain restrictions
Testing the stability of the estimated regression model over time or in different cross-sectional units
Testing the functional form of regression models

6. To Test the overall significance of a multiple regression, which of the following test is use?

a) Z test b) **The F-Test**

c) t test d) Chi square test

b) Mention any two applications of the F test in hypotheses testing.

The F test can test a variety of hypotheses, such as whether (1) an individual regression coefficient is statistically significant, (2) all partial slope coefficients are zero, (3) two or more coefficients are statistically equal, (4) the coefficients satisfy some linear restrictions, and (5) there is structural stability of the regression model.