

Quiz # 6  
Chapter 8  
**Suggested Answers**  
Econometrics 06216

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

- Choose the **MOST CORRECT** answer
  - You have 5 minutes to solve out this quiz
1. Considering that  $D_i$  and  $W_i$  are dummy variables. Which of the following models represents a shift in slope but holds the intercept constant?
    - a.  $y_i = \beta_0 + \beta_1 x_i + \beta_2 D_i + \mu_i$
    - b.  $y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \mu_i$
    - c.  $y_i = \beta_0 + \beta_1 x_i + \beta_2 W_i x_i + \beta_2 W_i + \mu_i$
    - d. All of the above
    - e. **None of the above**
  2. Dummy variables are **most likely** to be :
    - a. Variables that can take values of 1 and -1.
    - b. Variables that can take values of 0 and -1.
    - c. **Variables that can take values of 0 and 1.**
    - d. Variables that can take values between 0 and 1
    - e. None of the above.
  3. Which of the following statements is true:
    - a. You cannot have more than four dummy variables in a regression equation.
    - b. The inclusion of a dummy variable does not alter the properties of the OLS model.
    - c. A dummy variable can be used to test hypotheses.
    - d. **b) and c) are correct.**
    - e. a) and c) are correct.
  4. Which of the following is an example of a dummy variable:
    - a. A variable coded as 0 if the subject is male and 1 if it is female.
    - b. A variable coded as 0 if the subject is 16 years old or older, and 1 if he/she is under 16 years old.
    - c. A variable coded as 1 if a person is the first born child in his/her family and 0 if he/she is the second or later child.
    - d. **All of the above.**
    - e. None of the above.
  5. In the following model  $D_i$  is a dummy variable that takes the value of 1 if  $i$  is a girl, and 0 if  $i$  is a boy;  $X_i$  is the money  $i$  has to buy his/her lunch in school, and  $Y_i$  is the amount of money  $i$  spends buying candies. Then,  $\alpha_2$  is:
 
$$Y_i = \alpha_0 + \alpha_1 X_i + \alpha_2 D_i + \varepsilon_i$$
    - a. The amount of extra money spent by a boy in comparison with a girl, for each dollar extra in his money to have lunch.
    - b. The amount of extra money spent by a girl in comparison with a boy, for each dollar extra in her money to have lunch.
    - c. The amount of money that a boy spends in candies.
    - d. The amount of money that a girl spends in candies.
    - e. **None of the above**