Quiz # 4
Chapter 6 and 7
Suggested Answers
Econometrics 06216

Name_____

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- Choose the **<u>MOST CORRECT</u>** answer
- You have 5 minutes to solve out this quiz

1. You can not estimate a model by OLS (without doing modifications) that is:
    a. Linear in the independent variables but not in the coefficients.
    b. Linear in the coefficients but not in the independent variables.
    c. Linear in the dependent variables, but not in the independent variables.
    d. All of the above could be estimated.
    e. None of the above could be estimated.

2. A "good" estimator for the variance-covariance matrix of β is:

    a. $Var(\beta) = \sigma^2 \left[X^T X \right]^{-1}$

    b. $Var(\beta) = s^2 \left[X^T X \right]$

    c. $Var(\varepsilon) = s^2 \left[XX^T \right]^{-1}$

    d. None of the above

3. A p-value of 0.05, for a t-test which Ho: $\beta_1 \leq 0$, <u>implies</u> that:
    a. The area in each tail is 0.05.
    b. The area in the tail is 0.05.
    c. The sum of each of the three tail´s area is 0.05.
    d. None of the above.

4. In a multiple regression model with intercept, we can affirm that:
    a. The R^2 is larger number than 1.
    b. The OLS residuals always sum to zero.
    c. The OLS estimators are biased.
    d. The OLS estimators are efficient.

5. When we fail to reject Ho: $\beta = 0$, to avoid Type II errors, we can conclude that:
    a. β is equal to zero.
    b. β is not equal to zero.
    c. β is not statistically significantly different from zero.
    d. None of the above.