

**Quiz # 7**  
**Chapter 10**  
**Suggested Answers**

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

- Choose the **MOST CORRECT** answer
  - You have 5 minutes to solve out this quiz
1. About the OLS estimator of the variance of the coefficients of certain model with  $\sigma_i^2 = \sigma^2 X_i^2$ , you can affirm that:
    - a. It remains unbiased but inefficient.
    - b. **It is biased.**
    - c. It is correct
    - d. B and C
    - e. None of the above.
  2. Suppose you have the next model:  $Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \varepsilon_i$  and you find out that the p-value corresponding to the significance test of  $\beta_2$  is 0.001. In presence of **no** homokedasticity, you may conclude:
    - a.  $\beta_2$  is statistically significant.
    - b.  $\hat{Y}_i$  increases in  $\hat{\beta}_2$  when  $X_{2i}$  increases in one unit.
    - c.  $\beta_2$  is not statistically significant.
    - d. **None of the above.**
  3. If your dataset has heteroskedasticity, but you completely ignore the problem and use a plain OLS command, you will.
    - a. get biased parameter estimates.
    - b. **get parameter standard error estimates that could be either too large or too small .**
    - c. get t-test statistics that make you overly optimistic about your parameters being statistically different from zero.
    - d. get t-test statistics that make it look like your parameters are not different from zero when in fact they are.
    - e. All of the above
  4. If  $\text{var}(\varepsilon_i) = \sigma^2 X_i$ , the correction by FGLS will be done by multiplying the entire equation by:
    - a.  $\frac{1}{X_i}$
    - b.  $X_i$
    - c.  $\frac{1}{\sqrt{X_i}}$
    - d.  $X_i^2$
    - e. None of the above.
  5. In presence of heteroskedasticity, the OLS estimators:
    - a. **Remain consistent**
    - b. Remain BLUE
    - c. Remain efficient
    - d. All of the above.
    - e. None of the above.