

**EE 325 Section 1 Nov15,2022 (In class quiz)**

**Name:** \_\_\_\_\_ **Last 4 digits student ID:** \_\_\_\_\_

**Quiz 5**

1. To study the rate of growth of population in Belize over the period 1970-1992, Mukherjee et al. estimated the following models:

Model I:

$$\ln(\widehat{Pop})_t = 4.73 + 0.024t$$
$$t = (781.25) (54.71)$$

Model II:

$$\ln(\widehat{Pop})_t = 4.77 + 0.015t - 0.075 D_t + 0.011 D_t t$$
$$t = (2477.92) (34.01) (-17.03) (25.54)$$

where Pop = population in millions,  $t$  = trend variable,  $D_t = 1$  for observations beginning in 1978 and 0 before 1978, and ln stands for natural logarithm.

- a. In Model I, what is the rate of growth of Belize's population over the sample periods?
- b. Are the population growth rates statistically different pre- and post 1978? How do you know? If they are different, what are the growth rates for 1972-1977 and 1978-1992.