

Florida International University
ECO 4933 Topics in Theory – Fall 2015
Midterm #1 – October 1st, 2015 – Answer Key

PART I – Multiple Choice

1. Please circle the option you think is right.

- a. D
- b. B
- c. A
- d. B
- e. D
- f. A
- g. C

PART II – Essay or Numeric

***Instructions:** Please answer the questions in the answer sheets included with the exam. Make sure to number them once you have finished your exam. Use words or formulas, and graphs when requested, to state your argument, but make sure to state it **clearly and completely**. Make sure I can understand your handwriting. If I can't I will assume that your answer is **wrong**. Good luck!*

2. In late 2015 the world is stunned by the arrival of advanced aliens on Earth. The aliens turn out to be friendly, and use their advanced technology to instantly create an enormous stock of new physical capital for us to use. The capital stock in the U.S. goes from K_0 to K_1 where $K_1 > K_0$.
- a. Rises immediately.
 - b. Output jumps today, but growth rate declines back to the old line.
 - c. In the long run there is no change in parameters (s , n , δ). The SS level of y is the same as before.
 - d. Graph is in your exam.
3. Beginning in the 19th century, countries began entering what is called a “Demographic Transition”, where child-birth rates fell rapidly. As a result, population growth fell

permanently from n' to n'' . Examine this change in the Solow model with technological progress, assuming the economy begins in steady state.

- a. Graph is in your exam.
 - b. Graph is in your exam.
 - c. Graph is in your exam.
 - d. Only the level not the growth rate.
4. Ideas are not rival and non-excludable (to a certain extent). The production function with ideas exhibits increasing returns to scale, therefore we cannot assume perfect competition like in the Solow model.