

Place your name on the back of this sheet of paper and nowhere else. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (15 points) Explain the equation below. For a_K and a_N , you do not need to explain what happens when they change, but you do need to explain why they are less than 1.

$$\frac{\Delta Y}{Y} = \frac{\Delta A}{A} + a_K \frac{\Delta K}{K} + a_N \frac{\Delta N}{N}$$

2) (25 points) Draw the S/I diagram for a large open economy with a current account deficit. Explain how you know the diagram shows a current account deficit. Illustrate the effects of an increase in the corporate tax rate in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the interest rate, level of saving in both countries, level of investment in both countries, and the current account deficit?

3) (25 points) Draw the S/I diagram for a large open economy with a capital-financial account deficit. Explain how you know the diagram shows a capital-financial account deficit. Illustrate the effects of a negative supply shock in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the interest rate, level of saving in both countries, level of investment in both countries, and the capital-financial account deficit?

4) (20 points) Without drawing a diagram, explain how a government deficit can cause a current account deficit, a.k.a. the twin deficits. Do you think the current account deficit would be bigger with a small open economy or a large open economy? Explain your logic.

5) (15 points) If a country's economy grew 7% over a period of time; its capital grew at 5%; and its labor grew at 6%, then how much was the growth in total factor productivity? Show all work and briefly explain what you did.