

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 160 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I cannot give extra time because some students have a class after your class.

1) (8 points) Answer EITHER Part A OR Part B.

A) Why might an increase of the depreciation rate have an indeterminate effect upon the amount of investment?

B) We assumed that all desired investment occurs in the year it is desired. Why might this not occur?

2) (12 points) Answer EITHER Part A OR Part B.

A) Explain  $uc = (r + d)p_k$  including why  $r$  and  $d$  are multiplied by  $p_k$ .

B) Explain  $NX = Y - (C^d + I^d + G)$ .

3) (12 points) Answer EITHER Part A OR Part B.

A) Suppose a country exports 200 worth of goods and 100 worth of services, imports 250 worth of goods and 75 worth of services, has net factor payments of -20, net unilateral transfers of -10, no net capital account transactions and statistical discrepancy, and an increase in foreign-owned assets in the country. (All numbers are billions of their currency.) How much are  $NX$ ,  $CA$ , and  $KFA$ ? Show all work. If it is not obvious what you are doing from the statistics, briefly explain how you are doing the calculation.

B) The book gives five statements which it says mean the same thing. One is, "Net foreign lending of \$10 billion." Another one is, "Net exports of \$10 billion (if net factor payments, NFP, and net unilateral transfers equal zero.)" Explain why these two statements are the same and why the parenthetical part is important.

4) (28 points) Answer EITHER Part A OR Part B.

A) Draw the S/I diagram for a large country which is running a current account deficit. How do you know the diagram shows a current account deficit? Draw a temporary positive productivity shock in the foreign country. Explain why the curve(s) moved as drawn. What happens to the interest rate, quantity of savings in both countries, and quantity of investment in both countries? Briefly explain how you reached each conclusion.

B) Draw the S/I diagram for a large country which is running a current account surplus. How do you know the diagram shows a current account surplus? Draw an increase in the price of capital in the foreign country. Explain why the curve(s) moved as drawn. What happens to the interest rate, quantity of savings in both countries, and quantity of investment in both countries? Briefly explain how you reached each conclusion.

5) (40 points) Answer EITHER Part A OR Part B.

A) Draw the  $MPK^f/uc_k$  diagram and the S/I diagram for a closed economy. Draw an increase in government spending with the assumption that Ricardian equivalence does not hold. Explain why the curves moved as drawn. What happens to the desired amount of capital, the user cost of capital, the level of savings/investment, and the interest rate?

B) Draw the  $MPK^f/uc_k$  diagram and the S/I diagram for a closed economy. Draw an increase in the corporate tax rate. Explain why the curves moved as drawn. What happens to the desired amount of capital, the user cost of capital, the level of savings/investment, and the interest rate?