

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 150 points (to be scaled up to 210 points) and is scheduled to take 75 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I can give extra time but not much.

1) (12 points) Answer EITHER Part A OR Part B.

A) On the Solow Growth Model's diagram we spent almost no time discussing  $k_G$  (golden rule) which is where the  $y=f(k)$  line is as far from the  $(n+d)k$  line as the economy can get. Why is that point important?

B) Answer this question without drawing the Solow Growth Model diagram. I used the model in class to prove that the USA will probably not be the number one economic power in your lifetime. Explain my logic.

2) (14 points) Use the endogenous growth model to answer ONE of the statements below. Explain your logic.

A) Is President Barak Obama's plan to improve the country's infrastructure a good plan?

B) Was President George W. Bush tax cut on dividends a good idea?

3) (16 points) Explain either  $c^* = f(k^*) - (n+d)k^*$  OR  $MPK^f = \frac{(r+d)p_k}{1-\tau}$

4) (16 points) Answer EITHER Part A OR Part B.

A) Suppose we buy \$300 worth of cleaning services from abroad, sell \$500 worth of books abroad, pay foreigners \$50 in factor payments, and receive \$30 worth of factor payments. Assume that all of these transactions are balanced by purchases or sales of bonds abroad. Calculate, net exports, the current account, and the capital financial account balances. Show all work and briefly state why you added or subtracted those numbers.

B) Is a decrease in foreign-owned assets in the USA a debit or a credit on the KFA. Give an example of foreign-owned assets in the USA and explain why that is a debit or credit to the KFA. Who is lending to whom in your example? Why do you say that?

5) (20 points) Illustrate ONE of the following events on the Solow Growth Model diagram. Explain why the line(s) moved as drawn. What happens to equilibrium output per worker and capital per worker? What is the economic intuition behind those results?

A) The depreciation rate decreases.

B) A new technology is developed which improves production capabilities.

6) (34 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. Illustrate the effects of an increase in the corporate tax rate. Explain why the curve(s) moved as drawn. What happens to the interest rate, desired level of capital, level of investment, and the level of savings?

B) Draw the  $MPK^f/uc_K$  diagram and the S/I diagram for a closed economy. Illustrate the effects of a decrease in the depreciation rate. Explain why the curve(s) moved as drawn. What happens to the interest rate, desired level of capital, level of investment, and the level of savings?

7) (38 points) Answer EITHER Part A OR Part B.

A) Draw the S/I diagram for a large country which has a capital financial account surplus. Explain how you know the interest rate is where you drew it and how you know the large country has a capital financial account surplus. Illustrate the effects of a positive supply shock in the rest of the world. Explain why the line(s) moved as drawn. What happens to the level of investment in both countries, the level of savings in both countries, the interest rates, and the size of the capital financial account surplus? Show each of them on your graph.

B) Draw the S/I diagram for a large country which has a current account surplus. Explain how you know the interest rate is where you drew it and how you know the large country has a current account surplus. Illustrate the effects of an decrease in the future marginal productivity of capital in the rest of the world. Explain why the line(s) moved as drawn. What happens to the level of investment in both countries, the level of savings in both countries, the interest rates, and the size of the current financial account surplus? Show each of those six variables on your graph.