

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 cannot give extra time because some students have a class after your class.

1) (10 points) Answer EITHER Part A OR Part B.

A) Why don't we measure technology directly when measuring the growth of the economy?

B) When we drew the S/I diagram for a small country, we never had both the level of saving change and the level of investment change at the same time. Why not?

2) (10 points) Answer EITHER Part A OR Part B.

A) Give an example of a *decrease in US-owned assets abroad*. Is that a financial inflow or outflow? Explain your logic.

B) Give an example of a *increase in foreign-owned assets in the US*. Is that a financial inflow or outflow? Explain your logic.

3) (12 points) For ONE of the following events, explain how this would affect the long-run growth of the economy in the endogenous growth model. Make sure you give economic logic.

A) Patent lives are lengthened.

B) Taxes on interest and dividends are cut.

4) (12 points) Answer EITHER Part A OR Part B.

A) There is an event which may or may not move the investment line on the S/I diagram. What is that event and why is the effect indeterminate?

B) There is an event which may or may not move the saving line on the S/I diagram depending upon what you assume. What is that event and why might it not move the line?

5) (14 points) For ONE of the following events, determine what happens to the trade balance, the current account, and the capital financial account. For the capital financial account, determine if it is short-term capital or long-term capital. Briefly explain your logic for all variables.

A) We import and iPhone from China for \$500.

B) We sell \$10,000 worth of Exxon stock to a Canadian.

6) (14 points) Answer EITHER Part A OR Part B.

A) Prior to this course, you probably thought that we want to maximize the capital-labor ratio because that means we have the most output per worker. The Solow Growth Model proves this wrong. What is the economic reason this is wrong? There is no need for the graph.

B) Draw the Solow Growth Model diagram but have the economy start to the left of the equilibrium. Explain how the economy moves towards the equilibrium?

7) (16 points) Answer EITHER Part A OR Part B.

A) Explain $\Delta Y/Y = \Delta A/A + a_K(\Delta K/K) + a_N(\Delta N/N)$. You can treat all of the $\Delta X/X$ as one variable assuming you tell me what is. Since a_K and a_N are parameters, you do not need to explain them.

However, I want you to tell me why they add up to 1.

B) Explain $uc_k = (r+d)p_k/(1-\tau)$

8) (18 points) Answer EITHER Part A OR Part B.

A) Draw the MPK^f/uc_K diagram. Illustrate the effects of an increase in corporate tax rate on the diagram. Explain why the curve(s) moved as drawn. What happens to the user cost of capital and the desired amount of capital?

B) Draw the MPK^f/uc_K diagram. Illustrate the effects of an increase in interest rates on the diagram. Explain why the curve(s) moved as drawn. What happens to the user cost of capital and the desired amount of capital?

9) (18 points) Answer EITHER Part A OR Part B.

A) Draw the Solow Growth Model diagram. Illustrate the effects of an increase in the growth rate of population. Explain why the curve(s) moved as drawn. What happens to the equilibrium capital-labor ratio and the equilibrium GDP per capita?

B) Draw the Solow Growth Model diagram. Illustrate the effects of a decrease in the savings rate. Explain why the curve(s) moved as drawn. What happens to the equilibrium capital-labor ratio and the equilibrium GDP per capita?

10) (26 points) Answer EITHER Part A OR Part B.

A) Draw the S/I diagram for a large country with a current account deficit. Explain how you know it is a current account deficit. Illustrate the effects of a temporary positive productivity shock in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the level of saving in both countries, level of investment in both countries, and the size of the current account deficit?

B) Draw the S/I diagram for a large country with a capital financial account deficit. Explain how you know it is a capital financial account deficit. Illustrate the effects of an increase in the future marginal productivity of capital in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the level of saving in both countries, level of investment in both countries, and the size of the capital financial account deficit?