

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 I won't give much.

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

A) Why don't we care about k_{MAX} on Solow growth model? Explain why that point is pointless.

B) In the Solow Growth Model, is k_G or k^* likely to be bigger? Explain your logic.

2) (12 points) Explain EITHER the equation in Part A OR the equation in Part B.

A) $s \cdot f(k) = (n+d)k$

B) $\Delta Y/Y = \Delta A/A + a_K \Delta K/K + a_N \Delta N/N$. Do not worry about a_K and a_N changing, but do say why they are not equal to 1.

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

A) In a closed economy, why should $S = I$? Explain your logic.

B) In the MPK^f line, why do we have MPK^f rather than MPK ? Explain your logic.

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

A) Draw an S/I diagram for a small open economy with balanced trade and a balanced government budget. Illustrate the effects of the government deciding to run a budget deficit to explain the term "twin deficits."

B) Are NFP and unilateral transfers part of CA or KFA? Why? Explain your logic.

5) (16 points) Answer EITHER Part A OR Part B.

A) Draw the Solow growth model graph, Illustrate the effects of President Trump's kicking illegal immigrants out of the country. Explain why the curve(s) moved as drawn. What happens to the capital-labor ratio and the GDP per capita in the long-run?

B) Draw the Solow growth model graph, Illustrate the effects of President Trump's efforts to increase use of fossil fuels (which will make climate change worse). Explain why the curve(s) moved as drawn. What happens to the capital-labor ratio and the GDP per capita in the long-run?

6) (24 points) For EITHER the events in Part A OR the events in Part B, do the double entry bookkeeping. Briefly state how you got each entry. What is the combined net effect upon NX, CA, short-run KFA, long-run KFA, and total KFA?

A) An American buys a \$20 shirt from the Chinese company Temu. A Chinese citizen buys \$500 worth of Ford stock.

B) A Canadian buys a wallet from Pingree (a company that upcycles car leather in Detroit, Michigan) for \$40. An American buys \$640 worth of Shopify (a Canadian company from a Canadian).

7) (28 points) Answer EITHER Part A OR Part B.

A) Draw an S/I diagram for a large open economy with a current account deficit. Explain how you know it is a current 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 levels of S in both countries, the levels of I in both countries, the interest rate and the current account?

B) Draw an S/I diagram for a large open economy with a capital-financial account deficit. Explain how you know it is a current account deficit. Illustrate the effects of corporate tax rates in the rest of the world going down over the past few decades. Explain why the curve(s) moved as drawn. What happens to the levels of S in both countries, the levels of I in both countries, the interest rate and the capital-financial account? <https://taxfoundation.org/topics/corporate-tax-rates-around-the-world/>

8) (32 points) Answer EITHER Part A OR Part B.

A) Draw the MPK^{fuc_k} diagram and the S/I diagram for a closed economy. Illustrate the effects of the government cutting taxes without Ricardian Equivalence. Explain why the curves moved as drawn. What happens to the user cost of capital, desired capital, interest rate, level of saving, and the level in investment?

B) Draw the MPK^{fuc_k} diagram and the S/I diagram for a closed economy. Illustrate the effects of climate change increasing the depreciation rate. Explain why the curves moved as drawn. What happens to the user cost of capital, desired capital, interest rate, level of saving, and the level in investment?