

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) Explain EITHER the equation in Part A OR the equation in Part B.

A)  $c = f(k) - (n + d)k$  in the steady state equilibrium

B)  $\Delta Y/Y = sA - d$

2) (14 points) Answer EITHER Part A OR Part B.

A) When we calculated A, using the Solow Residual, what were we really calculating? What can affect it other than technology? Explain your logic.

B) When we first drew the Solow Growth Model graph, we found  $k_{MAX}$ . What was that and why do we not want to be that?

3) (16 points) Answer EITHER Part A OR Part B referring to the Endogenous Growth Theory equation  $\Delta Y/Y = sA - d$ .

A) President George W. Bush cut the tax on capital gains. Explain how that will affect the growth rate of the economy in the long run. Explain your logic.

B) All four 21<sup>st</sup> century presidents increased the government deficit. Explain how that will affect growth rate of economy in the long run. Explain your logic.

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

A) The Quantity Theory of Money assumes what about the velocity of money. Explain both why that assumption makes sense, and what will cause the velocity to change and why it causes the velocity to change.

B) If the Quantity Theory of Money holds in the long run, then what is the long-run effect of an increase in the money supply? Explain your logic.

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

A) What are the three functions of money? For ONE of them, does M1 or M2 do a better job at that? Explain your logic.

B) What has happened to the liquidity of M2 over the past half century? How has that affected the demand for M1 and M2? Explain your logic.

6) (16 points) Answer EITHER Part A OR Part B.

A) Suppose that you bought a \$100 belt made in Italy from Italian leather. What happens to the current account, long-term capital-financial account, and the short-term capital-financial account? Explain what caused them to change.

B) Suppose that you sold a \$1000 worth of Toyota stock to a Japanese citizen. What happens to the current account, long-term capital-financial account, and the short-term capital-financial account? Explain what caused them to change.

7) (18 points) Answer EITHER Part A OR Part B.

- A) Use the S/I diagram for a small country to explain the twin deficits.
- B) Draw the S/I diagram for a small country with a CA surplus. Illustrate the effects of a decrease in the interest rate in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the level of saving, level of investment, and the CA surplus.

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

A) Draw the Solow Growth Model diagram. I found a [webpage](#) which lists the 20 countries with the highest population growth rate from 2020 to 2021. All are in Africa. Use your graph to predict whether they will be getting richer or poorer in the future. Explain why the curve(s) moved as drawn and why the conclusion about GDP per capita makes sense.

B) Climate change is going to cause more severe storms which will destroy or damage more buildings. Draw the Solow Growth Model diagram. Use it to show the impact of climate change on how well off our economy is. Explain why the curve(s) moved as drawn and why the conclusion about GDP per capita makes sense.

9) (24 points) Answer EITHER Part A OR Part B.

A) Draw an S/I diagram for a large country with a CA deficit. Explain how your graph shows a CA deficit. Illustrate the effects of a decrease in MPC in the rest of the world, assuming Ricardian Equivalence does not hold. Explain why the curve(s) moved as drawn. What happens to the level of saving in both countries, the level of investment in both countries, size of the deficit, and the interest rate?

B) Draw an S/I diagram for a large country with a KFA deficit. Explain how your graph shows a KFA deficit. Illustrate the effects of a decrease in the price 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, the level of investment in both countries, size of the deficit, and the interest rate?