Wilfrid W. Csaplar Jr., Ph.D. Economics 302 Exam #2 2005/03/24

Write your name on the cover of the test booklet and nowhere else. 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 14-point question should take 7 minutes. I cannot give extra time because there are classes after yours.

1) (12 points) Answer EITHER Part A OR Part B.
A) Money has three functions. Name, without explaining, the three. Which one of them is best served by M3? Why did you choose that one?
B) Do the items in M1 have a higher or lower interest rate than the items which are in M3 other than those in M2? Explain your logic.

2) (12 points) Answer EITHER Part A OR Part B.
A) The quantity theory of money assumes the velocity of money is constant. Why might we expect that to be true?
B) The quantity theory of money assumes the velocity of money is constant. Why has that not been true for M1?

3) (14 points) Answer EITHER Part A OR Part B.
A) Why does a government deficit cause a current account deficit and a capital-financial account surplus? There is no need to draw a diagram.
B) Will a decrease in the savings rate in the USA affect the USA more if it is a small or large country? Explain your logic.

4) (16 points) Answer EITHER Part A OR Part B.
A) Explain why an increase in the expected rate of inflation and an increase in the price level will have different effects upon the demand for money.
B) How would an increase in the liquidity of alternative assets affect the demand for money? How would an increase in wealth affect the demand for money? Explain your logic for both parts.

5) (16 points) Explain EITHER the equation in Part A OR the equation in Part B.
A) $c = f(k) - (n+d)k$
B) $M^d = P*L(Y, r+\pi^e)$

6) (16 points) Answer EITHER Part A OR Part B.
A) Over the past twenty years an economy's total output has grown from 1000 to 1300, its capital stock has risen from 2500 to 3250, and its labor force has increased from 500 to 575. What were the growth rates of GDP, capital, labor, and technology if $a_k = 0.3$ and $a_N = 0.7$? Show all work and briefly explain how you got the growth of technology.
B) Draw the per worker production function as a function of the capital-to-labor ratio. Assume that two countries are identical except country A has a higher capital-to-labor ratio than country B. Which country would you expect to grow faster? Explain your logic.

7) (18 points) Illustrate EITHER the event in Part A OR the event in Part B on Solow's diagram of savings per capita as a function of capital-to-labor ratio. Explain why the curve(s) moved as drawn. Explain the economic reason why the capital-to-labor ratio changed as drawn.
A) The population growth rate increases.
B) An improvement in technology occurs.

8) (18 points) Answer EITHER Part A OR Part B.
A) The endogenous growth model says that $\Delta Y/Y = sA - d$. The current administration has been increasing spending while cutting taxes. How will this affect the growth of GDP? Explain the economics of your answer and explain how the equation shows the effects your describe.
B) The endogenous growth model says that $\Delta Y/Y = sA - d$. The government of Egypt has been trying to improve infrastructure such as the roads, electricity, and schools. How will this affect the growth of GDP? Explain the economics of your answer and explain how the equation shows that effect.

9) (28 points) Illustrate EITHER the event in Part A OR the event in Part B on the savings and investment diagram for the USA (a large country) and the rest of the world. Assume that the USA starts with a <u>current account surplus</u>. Explain why the curve(s) moved as drawn, why the interest changed, and how the diagram shows a current account surplus in the USA. What is the long-term impact on the growth of the economy in the world and in the USA? Explain your logic.
A) The future marginal productivity of capital in the rest of the world increases.
B) The consumers in the USA decide they want to consume more.