

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) Why isn't full employment rate of unemployment 0%? Explain your logic.

B) Which type of unemployment actually increases when GDP increases? Explain your logic.

2) (12 points) Answer EITHER Part A OR Part B.

A) How do durable goods cause the *Permanent Income Hypothesis* problems?

B) How do borrowing constraints cause the *Life-Cycle Model* problems?

3) (12 points) Explain EITHER  $S_{GVT} = (T - TR - INT) - G$  OR  $S = Y + NFP - C - G$ .

4) (18 points) Answer EITHER Part A OR Part B.

A) The book says that a tax cut may have two different effects upon the national savings,  $S$ . Explain both possible effects.

B) Explain Ricardian Equivalence. If it holds, then what is the effect of the government's deficit on national savings?

Explain your logic.

5) (18 points) Answer EITHER Part A OR Part B.

A) Use the following data to calculate GDP, GNP, NNP, NI, PI, and DPI. Consumers buy \$1000 worth of goods. Firms buy \$400 worth of machines. The government buys \$600 worth of services. We import \$200 worth of goods and export \$150 worth. We paid foreigners \$14 worth of interest and received \$12. Capital lost \$40 worth of value. Firms paid \$30 worth of sales tax and \$45 of business taxes. The government paid out \$60 worth of Social Security. Consumers paid \$120 worth of income tax. Show all work. If you need data which is not provided, assume it is zero.

B) When we went from NI to PI, we added one item and subtracted two. What was added and subtracted? Why did we add or subtract those items. Basically, this is an explain the equation question where you supply the equation.

6) (20 points) Answer EITHER Part A OR Part B.

A) Draw the graph for the Life-Cycle Model. Illustrate the effects of the Bush/Obama stimulus packages. Explain why the curve(s) moved as drawn. What is the impact on GDP? Why does the theory predict that?

B) Draw the inter-temporal budget constraint. Illustrate the effects of an increase in the interest rate. Explain why the graph moved as drawn. Given this diagram, what will happen to  $S_{PVT}$  when the interest rates increase? Explain your logic.

7) (20 points) Answer EITHER Part A OR Part B.

A) Just prior to the start of "The Great Recession," the government was running a big deficit and private savings was negative. What are two bad long-term problems which can result from this? Explain how they are caused by the government and public's actions. You can have one political problem, but you must have at least one economic problem.

B) We discussed three ways of calculating GDP. What are two of them? Why should they give the same value?

8) (38 points) Answer EITHER Part A OR Part B.

A) Draw the production function with labor on the horizontal axis. Also draw the real labor supply/demand diagram. Illustrate the effects of an earthquake which destroys a lot of buildings, but kills nobody. Explain why the curves moved as drawn. What happens to the labor hired, the real wage rate, and the real GDP?

B) Draw the production function with labor on the horizontal axis. Also draw the real labor supply/demand diagram. Illustrate the effects of an increase in the income tax. Explain why the curves moved as drawn. What happens to the labor hired, the real wage rate, and the real GDP?