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 100 points (to be scaled up to 160 points) and is scheduled to take 50 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) (14 points) Explain EITHER $S_{PVT} = (Y + NFP + TR + INT - T) - C$ OR $c_1 = (y_0 + a - c_0)(1+r) + y_1$.

2) (12 points) Answer EITHER Part A OR Part B.
A) In this course, we use aggregate measures. What does that mean? What is the disadvantage of that?
B) When we put GDP in a graph, is that real GDP or nominal GDP? Why do we use that variable rather than the other one?

3) (16 points) Answer EITHER Part A OR Part B.
A) Use the following data to calculate GDP, GNP, NNP, and NI. Consumers buy $1000 worth of goods. Firms buy $500 worth of machines. The government buys $600 worth of services. We import $200 worth of goods and export $150 worth. We paid foreigners $10 worth of interest and received $12. Capital lost $40 worth of value. Firms paid $30 worth of business taxes and retained $25 of earnings. Consumers paid $120 worth of income tax. Show all work. If you need data which is not provided, assume it is zero.
B) B) Use the table below to calculate real GDP for all three years using 2004 as the base year. Show all work.

	P 2003	Q 2003	P 2004	Q 2004	P 2005	Q 2005
Hats	$5/hat	20 hats	$10/hat	10 hats	$11/hat	12 hats
Bananas	$1/bunch	90 bunches	$2/bunch	100 bunches	$3/bunch	110 bunches

4) (38 points) Answer EITHER Part A OR Part B on both the labor supply/labor demand diagram and the production function as a function of labor. Explain why the curves moved as drawn. Use the same part for BOTH graphs.
A) New technology is found.
B) The income tax rate goes up.

5) (20 points) Answer EITHER Part A OR Part B.
A) Draw the inter-temporal budget constraint. Draw an increase in future income. Explain why the curve(s) moved as drawn.
B) Use EITHER the *Life-cycle Model* OR the *Permanent Income Model* to explain how a temporary tax cut will affect a person's consumption.