Georgia Institute of Technology
Advanced Macroeconomics
Spring 2008
QUIZ # 2 Key

Five multiple choice question, circle the **best answer**.

1. An economy is in equilibrium, and in this economy the net exports and private business investments are respectively equal to -$500 and $6000. If private saving in this economy equals $7200, the public saving (budget surplus) of this economy equals

a. $1200.

b. -$700.

c. $12700.

♠ **-$1700**.

e. none of the above.

$$
\begin{aligned}
&S = I + NX \\
&S = 6000 - 500 = 5500 \\
&S_p + S_{pub} = 5500 \\
&7200 + S_{pub} = 5500 \\
&S_{pub} = 5500 - 7200 = -1700
\end{aligned}
$$

2. In an economy, GDP=$20000; NI=$17500; transfer payments=$800; income earned but not received=$1200; personal income taxes=$1100; and private saving=$3700. Households' consumption for this economy equals

a. $15900.

b. $14700.

♣ **$12300**.

d. $2000.

e. none of the above.

$$
\begin{aligned}
&PI = NI + F - IEBNR \\
&PI = 17500 + 800 - 1200 = 17100 \\
&DI = PI - T = 17100 - 1100 = 16000 \\
&DI = C + S_p \\
&1600 = C + 3700 \\
&C = 16000 - 3700 = 12300.
\end{aligned}
$$

3. Given the following data: C=$3000; I=$1200; G=$2000; NX=-$500; capital depreciation=$200; and transfer payments=$800. Using our aggregate expenditure approach of GDP measurement, the net domestic product of this economy equals.

♠ **$5500**.

b. $5700.

c. $6200.

d. $6400.

e. $6900.

$$GDP = C + I + G + NX$$
$$GDP = 3000 + 1200 + 2000 - 500 = 5700$$
$$NDP = GDP - TD = 5700 - 200 = 5500.$$

4. How does net domestic product (NDP) differ from gross domestic product (GDP)?

a. GDP includes expenditures for gross products and pollute the environment; NDP does not.

b. GDP is gross because it values spending on each good and service in dollar terms; NDP exclude taxes.

c. GDP includes exports; NDP omits exports.

d. GDP includes all government spending, NDP subtracts taxes.

♠ **GDP includes that part of the capital stock used up in the production process; NDP does not**.

5. A closed economy is in equilibrium and is characterized by the following sectors

$$C = 10,000 + 0.8(Y - T)$$
$$Y = 100,000, \quad G = 8000, \quad T = 6000, \quad I = 6800.$$

The private saving of this economy equals

a. 6200.

b. 8500.

♣ **8800**.

d. 9200.

e. none of the above.

Since I mentioned that the economy is in equilibrium, that makes your life easier. You may calculate C and follow $S_p = Y - T - C$, but you don't need this expensive way.

$$S = I$$
$$S_p + S_{pub} = I$$
$$S_p + T - G = I$$
$$S_p + 6000 - 8000 = 6800$$
$$S_p = 6800 + 2000 = 8800$$

A little extension to this problem, If I do not offer you T but offer you private saving $S_p = 8800$ can you find out T. You follow this (check it out)

$$S_p = Y - T - C$$
$$8800 = 100000 - T - [10000 + 0.8(100000 - T)]$$
$$8800 = 100000 - T - 10000 - 80000 + 0.8T$$
$$8800 = 100000 - T - 10000 - 80000 + 0.8T$$
$$8800 = 10000 - 0.2T$$
$$0.2T = 10000 - 8800 = 1200$$
$$T = 6000.$$