# ECO 209Y <br> MACROECONOMIC THEORY 

## Term Test \#1

## LAST NAME

$\qquad$

FIRST NAME $\qquad$

## STUDENT NUMBER

$\qquad$

## INSTRUCTIONS:

1. The total time for this test is 1 hour and 45 minutes.
2. Aids allowed: a simple calculator.
3. Use pen instead of pencil.

DO NOT WRITE IN THIS SPACE
Part I ..... /40
Part II ..... /10
Part III

1. 

$\qquad$
/10
2. $\qquad$ /10
3. $\qquad$ 110
$\qquad$ 180

## PART I (40 marks)

## Instructions:

- Enter your answer to each question in the table below.
- Each correct answer is worth 2.5 marks. Note that a deduction of 0.5 mark will be made for each incorrect answer. Table cells left blank will receive a zero mark (i.e., no deduction).
- Do NOT guess your answers!

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|  |  |  |  |  |  |  |  |

1. If investment exceeds private saving by $\$ 40$ billion and government spending exceeds tax revenues by $\$ 30$ billion, then
A) the trade deficit is $\$ 10$ billion.
B) the trade surplus is $\$ 10$ billion.
C) the trade deficit is $\$ 70$ billion.
D) the trade surplus is $\$ 70$ billion.
E) we cannot say anything about the international trade balance.
2. The photocopy shop at the corner of College and Beverly had revenues of $\$ 300$ thousand and a profit of $\$ 30$ thousand in 2009. That year, the total expenditures of this shop were $\$ 80$ thousand in wages and salaries, $\$ 25$ thousand in rent, $\$ 100$ thousand in paper and ink, and $\$ 50$ thousand in taxes. In addition, the depreciation of the capital stock of the shop was $\$ 15$ thousand. The contribution of this photocopy shop to the country's GDP in 2009 was
A) $\$ 300$ thousand.
B) $\$ 275$ thousand.
C) $\$ 200$ thousand.
D) $\$ 150$ thousand.
E) $\$ 125$ thousand.

Use this space for rough work.

Consider a closed economy producing only two goods: computers and pizzas. The following table shows the prices and quantities produced and consumed of each good in 2015 and 2016. Use this information to answer questions 3 to 6 below.

|  | 2015 |  | 2016 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Price | Quantity | Price | Quantity |
| Computers | 800 | 500 | 700 | 550 |
| Pizzas | 10 | 8000 | 12 | 8500 |

3. Consider 2015 the base period. Measured by the GDP deflator, the rate of inflation in 2016 was:
A) -5.2 percent.
B) 7.8 percent.
C) 6.2 percent.
D) - 2.1 percent.
E) -7.2 percent.
4. Considering 2015 the base period, the real rate of growth in 2016 was:
A) 6.2 percent.
B) 8.6 percent.
C) 9.4 percent.
D) -3.4 percent.
E) 7.5 percent.
5. Using the chain method, the real rate of growth in 2016 was:
A) 6.4 percent.
B) 9.5 percent.
C) 9.3 percent.
D) -3.2 percent.
E) 7.6 percent.
6. Consider the quantities produced in 2015 to be the constant basket of goods purchased by a representative consumer. Measured by the CPI, the rate of inflation in 2016 was:
A) -7.1 percent.
B) 7.6 percent.
C) 6.2 percent.
D) -5.5 percent.
E) 3.5 percent.

## Use this space for rough work.

Use the following data of a hypothetical economy to answer questions 7 and 8.

| Consumption | 600 |
| :--- | ---: |
| Government expenditure on goods and services | 250 |
| Net exports | 50 |
| Capital consumption allowance (depreciation) | 130 |
| Corporate profits before taxes | 150 |
| Indirect taxes | 140 |
| Government transfer payments | 100 |
| Dividends | 80 |
| Corporate income taxes | 50 |
| Gross investment | 200 |
| Personal income taxes | 150 |

7. Given the information in the table above, what is the level of net domestic income?
A) 950 .
B) 830 .
C) 1100 .
D) 860 .
E) None of the above is correct.
8. Given the information in the table above, what is the size of the government budget surplus?
A) -30 .
B) 50 .
C) 10 .
D) -10 .
E) None of the above is correct.
9. Consider a closed economy without depreciation of the capital stock, without government transfer payments, and where personal income tax is the only source of government revenues. If GDP is $\$ 980$ billion, consumption is $\$ 650$ billion, private saving is $\$ 120$ billion, and government purchases are $\$ 180$ billion, which of the following is true in this economy?
A) Disposable income is $\$ 860$.
B) Investment is $\$ 120$.
C) The budget surplus is $-\$ 30$.
D) Personal income tax is 210.
E) None of the above is correct.
10. Consider an economy with a fixed price level. All else equal, a decrease in the marginal propensity to save
A) makes the AE curve flatter.
B) causes equilibrium income to fall.
C) decreases planned investment.
D) reduces the government budget deficit.
E) causes the money supply to rise.
11. If the $\mathrm{MPC}_{Y D}$ is 0.8 , there is a $\$ 0.25$ tax levied on each dollar of income, and the marginal propensity to import is 0.2 , then a $\$ 60$ increase in government purchases will cause the budget surplus to
A) decrease by $\$ 25$.
B) increase by $\$ 30$.
C) decrease by $\$ 40$.
D) decrease by $\$ 35$.
E) None of the above is correct.
12. Until the end of 2016 you were paying a rent of $\$ 2500$ a month for a nice condo in Liberty Village. You purchased this condo from your landlord on January 1, 2017. You paid \$550,000 for the condo and spent an additional \$50,000 in renovations. As a result, in 2017 Canada's GDP will
A) decrease by $\$ 30,000$.
B) increase by $\$ 600,000$.
C) increase by $\$ 570,000$.
D) increase by $\$ 50,000$.
E) increase by 20,000.
13. The Consumer Price Index in Canada had values of 100.0 in 1981 and 110.8 in 1982. The nominal rate of interest (i.e., the yield of a one-year government bond) was $18 \%$ on average in 1982. What was the average real rate of interest in 1982?
A) $18 \%$.
B) $25.2 \%$.
C) $10.8 \%$.
D) $7.2 \%$.
E) Not enough information to determine.

## Use this space for rough work.

14. The IS-curve will become flatter if
A) money demand increases.
B) the interest-sensitivity of investment decreases.
C) the marginal propensity to consume decreases.
D) the marginal propensity to save increases.
E) the income tax rate is reduced.
15. The minimum hourly wage in Ontario is scheduled to reach $\$ 14$ in January 2018, an increase of 23 per cent over current levels. By January 2019, the minimum wage will be $\$ 15$, an increase of 29 per cent over current levels. Which of the following statements best describes the likely impact of this minimum wage increase?
A) Unemployment will increase, AE and income will fall, and inflation will rise.
B) Unemployment will not change much but AE, income, and inflation will all rise.
C) Unemployment will fall but AE, income, and inflation will all rise.
D) Unemployment will increase, while AE and income will fall, and inflation will not change much.
E) Unemployment and income will not change much, but AE and inflation will increase.
16. "After struggling for years to adjust to sharply lower prices of crude oil, Canada's economy appears finally to be on a sustainable path to recovery," reported the Globe and Mail early this month. Which of the following statements best helps to explain this observation?
A) The Toronto housing market appears to be cooling off, thus reducing the likelihood of the housing bubble to burst.
B) Encouraged by greater consumer demand, the business sector is increasing its expenditure on fixed capital investment.
C) Imports have been falling for the last few months, thus increasing net exports.
D) Non-oil exports have been rising while imports have been falling, thus increasing net exports.
E) Total exports have been growing faster than imports, thus increasing net exports.

## Use this space for rough work.

## PART II (10 marks)

Consider the following model of a closed economy:

$$
\begin{aligned}
& C=325+0.75 Y D-30 i \\
& I=200-20 i \\
& G=600 \\
& T R=20 \\
& T A=120+0.2 Y \\
& Y_{f e}=2500
\end{aligned}
$$

a) What is the equation for the IS curve in this model? Show all your work. (2 marks)
b) What is the level of equilibrium $\left(Y^{*}\right)$ income when $i=5$ ? ( 1 mark) What is the size of the aggregate expenditure multiplier $\left(\alpha_{A E}\right)$ ? ( $\mathbf{2}$ marks) Show all your work.
c) What is the level of private saving (S) when the economy is in equilibrium at $i=5$ ? ( 1 mark) What is the level of government saving (or budget surplus, $B S$ ) at this equilibrium? (1 mark) Show all your work.
d) Given the situation of the economy and the budgetary situation of the government you have described above, what should the government do to improve this situation? Explain your answer. (3 marks)

## PART III (30 marks)

Instructions: Answer the following three questions in the space provided. You may continue your answers on page 12 if additional space is required (but clearly indicate that your answer continues on page 12). Each question is worth 10 marks.

1. Critically comment on the following statement: "A country runs a current-account deficit when investment exceeds national savings, and runs a surplus when investment is less than national savings. Therefore, a current-account deficit is a sign of high investment rates and a fast-growing economy."
2. Critically comment on the following statement: "The government runs a balanced budget at the initial equilibrium income. Now it increases the income taxes on the rich and reduces the income taxes on the middle class while still maintaining total taxes unchanged at the initial equilibrium income. Therefore, equilibrium income and the government budget will both remain unchanged."
3. Critically comment on the two theories that, according to Paul Krugman, conservative politicians tend to use to justify cutting taxes.
