

**ECO 209Y**  
**MACROECONOMIC THEORY AND POLICY**  
**Term Test #1**

**October 27, 2017**

**U of T E-MAIL:** \_\_\_\_\_@MAIL.UTORONTO.CA

**SURNAME  
(LAST NAME):**

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**GIVEN NAME  
(FIRST NAME):**

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**UTORID  
(e.g., LIHAO118):**

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**INSTRUCTIONS:**

- The total time for this test is **1 hour and 45 minutes**.
- The only aid allowed is a **non-programmable** calculator.
- **Write your name and identifying information above but keep this test paper and the Supplement closed until the start of the test is announced.**
- There are three parts to the test: **Part I** consists of 12 multiple-choice questions (30 points); **Part II** is one numerical problem (15 points); and **Part III** includes 3 short-answer questions (30 points). The **total** point-value of the test is **75 points**.
- This test includes **8 pages** plus the *Supplement*. The *Supplement* contains the multiple-choice questions but you must record your answers to each multiple-choice question in the table provided on the next page. **Anything written on the Supplement will not be graded.** We will only collect the test papers, not the *Supplement*.
- In Parts II and III, write your answers clearly and concisely in the space provided immediately after each questions. **Your entire answer must fit in the designated space.** No extra space/pages are possible. You cannot use blank space for other questions nor can you write answers on the *Supplement*.
- **Write in PENCIL and use an ERASER as needed.** This way you can make sure to fit your final answer in the appropriate space.

## PART I (30 marks)

### **Instructions:**

- Enter your answer to each of the 12 multiple-choice questions (see the Supplement) 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

Correct answers: \_\_\_\_\_ x (2.5) = \_\_\_\_\_

Incorrect answers: \_\_\_\_\_ x (– 0.5) = \_\_\_\_\_

Blank answers: \_\_\_\_\_ x (0.0) = 0.0

**Total:** \_\_\_\_\_

## PART II (15 marks)

Consider a closed economy with no indirect taxes and no depreciation of the capital stock. In this economy the total income is split evenly between two groups of households: high-income households (H) and low-income households (L). Personal income tax is the only tax in this economy, and initially there is a flat (unique) tax rate of 0.2.

This economy is characterized by the following behavioural relationships (where  $C_H$  is high-income households' consumption spending and  $C_L$  is low-income households' consumption spending):

$$C_H = 40 + 0.6 Y_D$$

$$I = 80 + 0.15 Y$$

$$C_L = 10 + 0.9 Y_D$$

$$G = 720$$

$$TA = 0.2 Y$$

$$TR = 0$$

$$Y_{fe} = 3,720$$

- a) As a function of  $Y$ , what are the expressions for the consumption curves of both high-income and low-income households? **(2 marks)** What is the expression for the overall consumption curve? **(3 marks)**

**b)** What is the expression for the AE curve? **(1 mark)** What is the value of the expenditure multiplier ( $\alpha_{AE}$ )? **(1 mark)** What is the level of equilibrium income in this economy? **(1 mark)**

**c)** All else equal, by how much should G increase to achieve equilibrium at the level of full-employment income? **(1 mark)**

**d)** Go back to the initial equilibrium of part c) above. Suppose now that the government increases the tax rate for high-income households to 0.3 and decreases the tax rate for low-income households to 0.1. As a function of  $Y$ , what is the expression for the overall consumption curve now? **(2 marks)** What is the level of equilibrium income? **(1 mark)**

**e)** Go back to the initial equilibrium of part c) above. If the government now imposes a total wealth tax of 100 to high-income households and gives a total transfer payment of 100 to low-income households, as a function of  $Y$ , what is the expression for the overall consumption curve now? **(2 marks)** What is the level of equilibrium income? **(1 mark)**

### **PART III** (30 marks)

**Instructions:** Answer the following three questions in the space provided. Each question is worth 10 marks.

1. **Critically evaluate the following statement:** *“Since we should all live within our means, a responsible government should keep a balanced budget at all times.”*

2. **Critically evaluate the following statement:** *“In a closed economy, national saving is equal to actual investment. Therefore, the government should implement policies that encourage greater saving to help the economy get out of a recession.”* **(Show your answer with the help of a diagram and explain the economics. Consider the *AE* model developed in class.)**

3. **Critically comment on the following statement:** *“Since tax cuts boost private sector confidence, a \$100 million decrease in autonomous taxes will have a greater expansionary effect than a \$100 million increase in government purchases.”* **(Show your answer with the help of a diagram and explain the economics. Consider the AE model developed in class.)**



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## SUPPLEMENT

**INSTRUCTIONS:**

- ***Read these instructions but keep this Supplement closed until the start of the test is announced.***
- This *Supplement* contains the multiple-choice questions but you must record your answers to each of the 12 multiple-choice questions in the table provided on page 2 of the test paper. ***Anything written on this Supplement will not be graded.*** We will only collect the test papers, not the *Supplement*.
- 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!***
- The only aid allowed is a ***non-programmable*** calculator.
- ***Write in PENCIL and use an ERASER as needed.***

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 1 and 2 below.

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

- Consider 2015 as the base period. Measured by the GDP deflator, the rate of inflation in 2016 was:
  - 5.2 percent.
  - 7.8 percent.
  - 6.2 percent.
  - 2.1 percent.
  - 7.2 percent.
- Using the chain method, the real rate of growth in 2016 was:
  - 6.4 percent.
  - 9.5 percent.
  - 9.3 percent.
  - 3.2 percent.
  - 7.6 percent.

Use the following data of a hypothetical economy to answer question 3 below.

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
Net investment	70
Personal income taxes	150

- Given the information in the table above, what is the level of net domestic income?
  - 950.
  - 830.
  - 1100.
  - 860.
  - None of the above is correct.

4. Which one of the following is implicitly assumed in the so-called short-run Keynesian model?
- A) Markets always clear.
  - B) Prices are fixed.
  - C) Relative prices are fixed.
  - D) Average price is fixed.
  - E) All of the above are assumed.
5. The production approach, the expenditure approach, and the income approach will all give the same measure of GDP assuming
- A) investment income from abroad is not included.
  - B) there is neither depreciation of the capital stock nor indirect taxes.
  - C) government transfers payments are nil.
  - D) there is no undistributed corporate profits.
  - E) there is no payment of interest on the national debt.
6. Consider an economy with a fixed-price level and with both direct and indirect taxes. In this economy, an increase in government infrastructure spending will have the largest impact on the level of income when it is financed by
- A) increasing sales taxes.
  - B) increasing production taxes.
  - C) cutting other expenditure programs.
  - D) raising income taxes to the rich.
  - E) raising income taxes to the middle class.
7. The apple juice industry produced \$1 billion worth of apple juice in 2016, using \$300 million worth of apples and \$50 million worth of sugar as material inputs. The apple juice industry also paid \$350 million in wages and salaries, \$50 million in rent, and \$150 million in taxes, thus generating a profit of \$100 million to shareholders. In 2016, the contribution of the apple juice industry to the country's GDP was
- A) \$1.0 billion.
  - B) \$650 million.
  - C) \$500 million.
  - D) \$400 million.
  - E) none of the above.
8. Which one of the following is **not** included in investment expenditure when using the expenditure approach to measure GDP?
- A) The purchase of a new coffee-maker by a Starbuck's franchise.
  - B) A private contractor building a garage in John's backyard.
  - C) The purchase of a new limousine for the use of the chairman of Magna Corporation.
  - D) The construction of a new house for the use of the Prime Minister.
  - E) All of the above are included in investment when measuring GDP.

9. Consider the following information about the economy (in millions of dollars):  $C = 900$ ;  $S = 150$ ;  $G = 300$ ;  $TA = 350$ ;  $TR = 100$ ;  $NX = 50$ ; and the government's debt is nil. The value of GDP is
- A) \$1,200 million.
  - B) \$1,250 million.
  - C) \$1,300 million.
  - D) \$1,350 million.
  - E) \$1,400 million.
10. Consider the fixed-price level model of the economy. If the economy is initially in equilibrium, inventory investment will increase when
- A) autonomous expenditure decreases.
  - B) savings exceed desired investment.
  - C) actual investment exceeds desired investment.
  - D) firms expect an increase in average sales.
  - E) all of the above occur.
11. Consider a closed economy with a fixed-price level and a balanced government budget at the initial equilibrium income. A reduction in government purchases will cause
- A) the level of consumption to fall, business inventories to rise, and a government surplus.
  - B) business inventories to rise and a government deficit, but no change in the level of consumption.
  - C) business inventories and the level of consumption to fall, but no change in the government budget balance.
  - D) both the level of consumption and business inventories to fall, and a government deficit.
  - E) none of the above.
12. The opposition of the business sector to the incoming increase in Ontario's minimum wage appears at odds with the currently prevailing view among most university economists. Which of the following might ultimately explain this difference in views?
- A) Businesses are concerned about its negative impact on employment.
  - B) Businesses worry about the prospect of higher inflation.
  - C) Businesses consider supply-side issues but not demand-side ones.
  - D) Businesses' bottom-line preoccupation is their short-run profits.
  - E) Both C) and D).