# ECO 209Y MACROECONOMIC THEORY AND POLICY

Term Test #1							
	LAST NAME FIRST NAME STUDENT NUMBER						
Ind	icate your section of the course:						
	Tuesday, 10-12 – L0101	Tuesday, 2-4 – L0201					
	Wednesday, 2-4 – L0301	☐ Thursday, 2-	-4 – L0401				
INSTRUCTIONS:							
<ol> <li>The total time for this test is 1 hour and 45 minutes.</li> <li>Aids allowed: a <u>simple</u>, non-programmable calculator.</li> <li>Use <u>pen</u> instead of <u>pencil</u>.</li> </ol>							
	DO NOT WRITE IN TI	IS SPACE					
Part I	/30	Part III 1.	/10				
Part I	I/20	2.	/10				
		3.	/10				

TOTAL \_\_\_\_/80

# PART I (30 marks)

#### Instructions:

- Enter your answer to each question in the table below.
- Each correct answer is worth 3 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	
									1	

- 1. Consider an economy without depreciation of the capital stock and where personal income tax is the only source of government revenue. If private saving equals private investment and the government has a negative budget surplus, which of the following is true?
  - A) C + I + G > Y.
  - $\mathsf{B}) \ \mathsf{C} + \mathsf{I} + \mathsf{G} = \mathsf{Y}.$
  - C) C + I + G < Y.
  - D) X > Q.
  - E) X = Q.
- 2. Suppose that an economy produces only apples, bananas, and oranges, and that prices (in dollars) and quantities (in millions of pounds) are as shown in the following table:

	Year	2012	Year 2013		
Good	Quantity	Price	Quantity	Price	
Apples	20	\$5	16	\$4	
Bananas	10	\$7	12	\$9	
Oranges	5	\$10	6	\$12	

Using the chain method of estimating real GDP, between 2012 and 2013 real GDP increased by approximately

A) 3.5 percent.

B) 4.0 percent.

- C) 5.0 percent.
- D) 6.5 percent.

E) 8.0 percent.

Use this space for rough work.

- Janet's photocopy shop has revenues of \$12,000 a month. Janet has monthly expenses of \$500 in taxes, \$200 in interest on a business loan, \$3,500 in paper, \$2,000 in ink-cartridges, \$2,500 in wages, and \$1,000 in rent. Her monthly profit is \$2,300. What is Janet's monthly contribution to GDP?
  - A) \$3,700.
  - B) \$6,000.
  - C) \$6,500.
  - D) \$9,700.
  - E) \$12,000.
- 4. Nominal GDP was \$975.0 billion in 2010, and it was \$1064.7 billion in 2013. The GDP deflator was 125 in 2010 and 130 in 2013. Rounding off to the nearest percentage point, what was the percent change in real GDP between 2010 and 2013?
  - A) 3 percent.
  - B) 5 percent.
  - C) 7 percent.
  - D) 10 percent.
  - E) 15 percent.
- 5. The economic crisis continues in the euro zone GDP is still lower than in 2008 and the rate of unemployment exceeds 10 percent in most countries. In a recent op-ed, Cristopher Ragan indicated that the implementation of wrong government policies has contributed to this situation. In his view, which of the following policies might be partly responsible for the current situation in the euro zone?
  - A) Increases in government spending resulting in structural deficits.
  - B) The European Central Bank setting the rate of interest too high.
  - C) Large increases in the money supply resulting in inflationary pressure.
  - D) Lower consumer and business confidence due to unsustainable government debt.
  - E) The implementation of austerity measures to reduce government deficits.
- 6. Consider the *AE* model of a closed economy with an expenditure multiplier ( $\alpha_{AE}$ ) equal to 2.5 and a marginal propensity to consume out of disposable income (*c*) equal to 0.8. If government purchases (*G*) increases by \$100 million, the government budget surplus will decrease by
  - A) \$100 million.
  - B) \$75 million.
  - C) \$62.5 million.
  - D) \$37.5 million.
  - E) \$35.5 million.

Use this space for rough work.

- 7. International Monetary Fund managing director Christine Lagarde recently made a blunt call for the U.S. and German governments to do more to improve their economies and the world economy. In her view, what should the governments of these two countries do?
  - A) Increase expenditure on infrastructure even at the cost of higher deficits.
  - B) Reduce the rate of interest to increase consumption and investment.
  - C) Reduce corporate taxes to increase investment.
  - D) Reduce income taxes to raise consumption expenditure.
  - E) Reduce government deficits to increase private confidence.
- 8. Consider a hypothetical open economy with a marginal propensity to import (*m*) equal to 0.15 and an aggregate expenditure multiplier ( $\alpha_{AE}$ ) equal to 4.00. If the marginal propensity to import (*m*) fell to 0.10, the aggregate expenditure multiplier ( $\alpha_{AE}$ ) would now be
  - A) 7.50.
  - B) 5.50.
  - C) 5.25.
  - D) 5.00.
  - E) 4.50.
- 9. Which of the following would cause the IS curve to shift inwards?
  - A) An increase in autonomous investment.
  - B) An increase in the rate of interest.
  - C) A decrease in autonomous imports.
  - D) A decrease in the rate of interest.
  - E) An increase in autonomous private savings.
- 10. Consider the *IS-LM* model of a closed economy, and suppose that consumption decreases as the interest rate increases. The slope of the *IS* curve
  - A) will be steeper the larger the interest sensitive of consumption.
  - B) will be flatter the larger the interest sensitivity of consumption and the smaller interest sensitivity of investment.
  - C) will be steeper the smaller the interest sensitive of consumption.
  - D) does not depend on the interest sensitivity of consumption.
  - E) will be flatter the smaller the interest sensitivity of consumption and the larger the interest sensitivity of investment.

Use this space for rough work.

## PART II (20 marks)

Consider a closed economy with fixed price level. This economy is characterized by the following equations (all dollar figures in billions):

C = 250 + 0.8 YD I = 140 - 20i G = 170 TA = 30 + 0.25 Y TR = 80 $Y_{fe} = 1400$ 

a) As a function of *i*, what is the equation for the AE curve? (1 mark) As a function of *i*, what is the equation for equilibrium income (Y\*)? (1 mark) If the central bank sets the rate of interest at 5 percent (i.e., *i* = 5), what is the level of Y\*? (1 mark) What is the size of the aggregate expenditure multiplier (α<sub>AE</sub>)? (1 mark)

b) At the equilibrium of part a), what is the level of private savings (S)? What is the level of government savings (or budget surplus, BS)? What is the level of private investment (I)? What is the size of the structural budget surplus? (4 marks)

c) You have been hired as an economic advisor to the Minister of Finance. Given the situation of the economy and the budgetary situation of the government you have described above, what policy would you advise the Minister to implement? <u>Briefly explain</u>. (2 marks)

d) All else equal, by how much should the government increase its purchases of goods and services (G) to move the economy to full employment (i.e., to Y<sub>fe</sub> = 1400)? (2 marks) What will be the levels of private savings (S), government savings (BS), and private investment (I) at full employment? (3 marks)

e) Go back to the equilibrium of part a) above. If the government decides to achieve full employment through a change in the rate of interest, at what level should the central bank set the rate of interest? (2 marks) What will be the levels of private savings (S), government savings (BS), and private investment (*I*) at full employment? (3 marks)

## PART III (30 marks)

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

#### 1. Critically comment on the following statement:

"An increase in consumers' preference for foreign cars will lead to an increase in consumption expenditure, greater equilibrium income, and an increase in the government budget surplus."

(Show your answer with the help of a diagram and <u>explain</u> the economics. Consider the *AE* model of the economy developed in class.)

### 2. Critically comment on the following statement:

*"If the private sector decides to increase savings, then investment will increase and so will equilibrium income."* 

(Show your answer with the help of a diagram and <u>explain</u> the economics. Consider the *AE* model of the economy developed in class.)

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#### 3. Critically comment on the following statement:

"Since tax cuts boost private sector confidence, a \$1 decrease in taxes will have a greater expansionary effect than a \$1 increase in government purchases."

(Show your answer with the help of a diagram and <u>explain</u> the economics. Consider the *AE* model of the economy developed in class.)