

## Assignment 3

Deadline: July 10, 2005

### Part A

### Multiple-Choice Questions

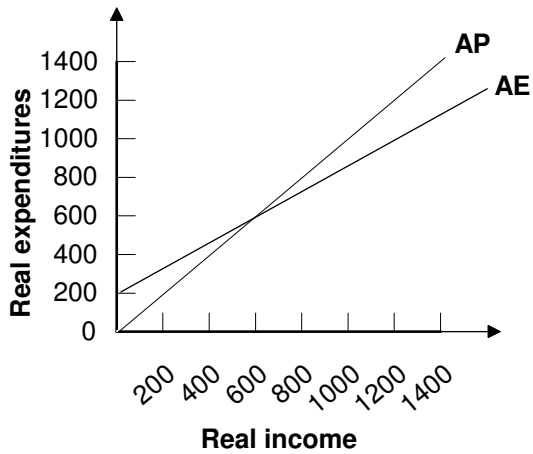
1. The multiplier model assumes that the aggregate supply curve is:
  - A) flat - the price level is fixed.
  - B) upward sloping - the price level is semi-flexible.
  - C) vertical - the price level is perfectly flexible.
  - D) irrelevant - only aggregate expenditures matter in this model.
  
2. In the expenditures function  $AE = AE_0 + mpcY$ , induced expenditures are given by:
  - A)  $AE_0$ .
  - B)  $AE_0 + Y$ .
  - C)  $mpc Y$ .
  - D)  $Y$ .
  
3. In the expenditures function  $AE = AE_0 + mpcY$  autonomous expenditures are given by:
  - A)  $AE_0$ .
  - B)  $Y$ .
  - C)  $mpc Y$ .
  - D)  $AE_0 + mpc Y$ .
  
4. If autonomous expenditures are \$1,000, income is \$5,000 and the marginal propensity to consume is 0.6, then total expenditures according to the expenditure function would be:
  - A) \$3,000.
  - B) \$4,000.
  - C) \$5,000.
  - D) \$13,500.

Use the following to answer question 5:

Income	Expenditures
\$ 0	\$1,000
1,000	1,800
2,000	2,600
3,000	3,400
4,000	4,200
5,000	5,000

5. The expenditures function that reflects the table above is:
- A)  $AE = 1000 + 0.8Y$ .
  - B)  $AE = 0.8Y$ .
  - C)  $Y = 100 + 0.8AE$ .
  - D)  $Y = 0.8AE$ .
6. If a country's exchange rate increases, its expenditures function will:
- A) become steeper.
  - B) become flatter.
  - C) shift up.
  - D) shift down.
7. If real wealth increases because the stock market is booming, we might expect the expenditures function to:
- A) become steeper.
  - B) become flatter.
  - C) shift up.
  - D) shift down.

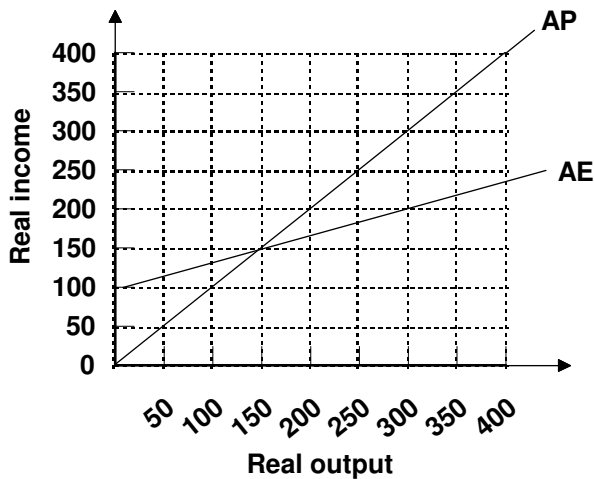
Use the following to answer questions 8-9:



8. Refer to the graph above. The equilibrium level of real income is:
- A) \$200
  - B) \$600
  - C) \$800
  - D) \$1000
9. Refer to the graph above. If income is \$1200:
- A) inventories are at the desired level.
  - B) inventories are above their desired level.
  - C) inventories are below their desired level.
  - D) real income cannot be determined.
10. Suppose you are told that  $AE = 7000 + 0.75Y$ . Using this equation and the multiplier, what will equilibrium income be?
- A) \$ 8,000.
  - B) \$10,000.
  - C) \$20,000.
  - D) \$28,000.
11. Suppose  $AE = 1000 + 0.2 Y$ . According to the multiplier equation, equilibrium income will be:
- A) \$1000.
  - B) \$1250.
  - C) \$2500.
  - D) \$3750.

12. If the *mpc* is 0.8 and autonomous expenditures are \$2000, then the multiplier equation implies that total equilibrium expenditures in the economy are:
- A) \$2,500.
  - B) \$4,000.
  - C) \$10,000.
  - D) \$40,000.
13. As the marginal propensity to consume rises, the multiplier:
- A) decreases.
  - B) remains constant.
  - C) increases.
  - D) changes unpredictably.
14. The *mps* is larger, other things equal, when:
- A) the multiplier is larger.
  - B) the multiplier is smaller.
  - C) the *mpc* is larger.
  - D) the economy is in equilibrium.

Use the following to answer question 15:



15. Refer to the graph above. If autonomous expenditures rose by 100 equilibrium income would be:
- A) 150
  - B) 300
  - C) 450
  - D) 600

## **Part B**                      **True/ False/ Uncertain Questions**

*Explain why the following statement is True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important*

- B-1.    A decrease in the price level shifts the AE curve upward and AD curve rightward.
- B-2.    A decrease in U.S. GDP shifts the Canadian AE curve downward and AD curve leftward.
- B-3.    An increase in the consumer confidence level leads to an increase in the equilibrium real income in the multiplier model.

## Part C

## Problem Solving Questions

Answer all parts of the following question.

### C-1

Consider the following simple, fixed price, open economy model of Canadian economy with excess capacity:

$$C = 60 + .6Y_d$$

$$T = 40 + 0.25Y$$

$$R = 20$$

$$I = 60$$

$$G = 70$$

$$X = 44$$

$$IM = 10 + 0.15Y$$

where,  $C$  is consumption,  $Y_d$  is disposable income,  $T$  is taxes,  $R$  is government transfers,  $Y$  is real GDP,  $I$  is investment,  $G$  is government expenditures on goods and services,  $X$  is exports and  $IM$  is imports.

- (a) Solve for aggregate expenditures ( $AE$ ) as a function of  $Y$ , and calculate the equilibrium level of real GDP. Illustrate your equilibrium in a diagram with  $AE$  on the vertical and  $Y$  on the horizontal axis. What is the value of the multiplier?
- (b) What happens to the equilibrium  $Y$  in part (a), if the  $X$  increases to 64 because of the rise in the U.S. real GDP? Find the new equilibrium  $Y$  and show it in the diagram.
- (c) Derive graphically (in a separate graph) the aggregate demand ( $AD$ ) curve from the  $AE$  function and show in the diagram how the  $AD$  curve will respond to this increase in  $X$ .