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KEYNESIAN CROSS

OVERVIEW

1. This chapter presents a graphical approach to the determination of income. Two different graphical approaches are provided.

2. Initially, both the consumption function and investment function are introduced, and the equilibrium level of income is determined. Then we add government spending and taxes to the model and find equilibrium again.

3. The income multiplier is discussed again in this graphical context. We find that, as before, when government spending rises, the equilibrium level of income rises by a multiple of the increase in government spending. The multiplier depends on the marginal propensity to consume.

4. The second graphical approach is to find equilibrium by equating investment plus government spending to saving plus taxes. We argue that we obtain the same conclusions from either approach.

MATCHING

_____	1.	consumption	a.	the amount of income that consumers do not spend or pay in taxes
_____	2.	investment		
_____	3.	government spending	b.	the amount the government spends for goods and services
_____	4.	saving	c.	the amount by which income changes when government spending changes by a dollar
_____	5.	taxes		
_____	6.	potential equilibrium	d.	the amount government collects from consumers
_____	7.	income multiplier	e.	the amount of income consumers spend for goods and services
			f.	business spending on new plant and equipment and inventories
			g.	where Y = C + I + G

TRUE-FALSE

_____ 1. When the government increases expenditure, we would usually expect the level of income to rise.

_____ 2. Government spending and taxes are always equal.

_____ 3. The equilibrium level of income occurs where Y = C + S + I

_____ 4. The graph of the consumption function shows a line with a positive slope.

_____ 5. A graph of the investment function shows a line that is downward sloping.

PROBLEMS

1. a. Suppose that the marginal propensity to consume increases from .6 to .8. What will happen to the consumption function as a result?

   _____

   b. If the MPC rises, what will happen to the equilibrium level of income?

   _____

   c. If the MPC rises, what happens to the MPS? _____

2. Draw a graph with the potential equilibrium line and the total spending line. Find the equilibrium level of income. Show what would happen to the total spending line if taxes rise. What will happen to the equilibrium level of income?

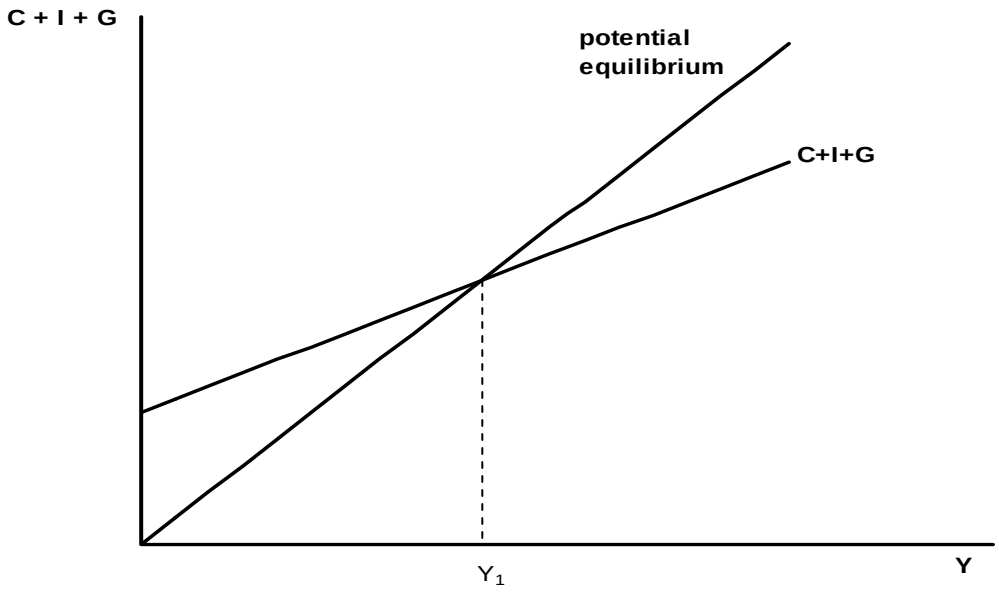
IN THE NEWS

The government has acted to lower taxes and at the same time government expenditure has risen as well.

a. Is the federal government lowering taxes and raising spending to make GDP grow?

   _____

b. Show on the graph below what will happen to the level of Y when either taxes fall or G rises.



c. At the time that these actions were taken, we were seeing that Y was falling in the economy. What might explain why this would be true?

_____

d. If Y was falling, should the government have increased spending even more?

_____

e. Suppose that by lowering taxes on investment (business spending), investment rises. What impact would this have on the level of income. Show this result graphically.

PRACTICE TEST

Circle the correct answer.

1. If Y is below equilibrium, then:
   a. total spending is greater than total output, inventories fall, and business increases production.
   b. total spending is less than total output, inventories fall, and business increases production.
   c. total spending is greater than total output, inventories rise, and business increases production.
   d. total spending is greater than total output, inventories fall, and business decreases production.

2. If government spending rise, then:

a. the level of income will fall.
b. the level of income rises by less than the amount that government spending rises.
c. the level of income rises by more than the amount that government spending rises.
d. the level of income rises by the same amount that government spending rises.

3. Increasing I in the Keynesian model is equivalent to:
   a. increasing the inflow in the bathtub.
   b. shifting aggregate demand to the right
   c. decreasing saving
   d. all of the above.

4. The equilibrium level of income is determined by the intersection of:
   a. consumption and investment.
   b. the 45^{o} line and total spending.
   c. autonomous spending and income.
   d. saving and consumption.

5. If taxes increase, then:
   a. the level of income will not change.
   b. the level of income will fall.
   c. the level of income will rise.
   d. we cannot determine what will happen to the level of income.

ANSWERS

Matching

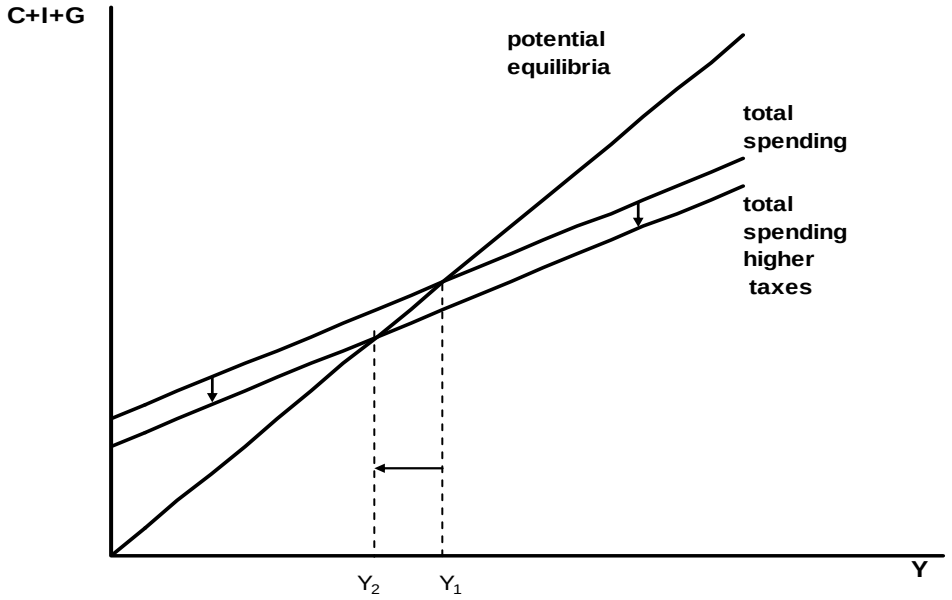
1. e
2. f
3. b
4. a
5. d
6. g
7. c

True-False

1. T
2. F
3. F
4. T
5. F

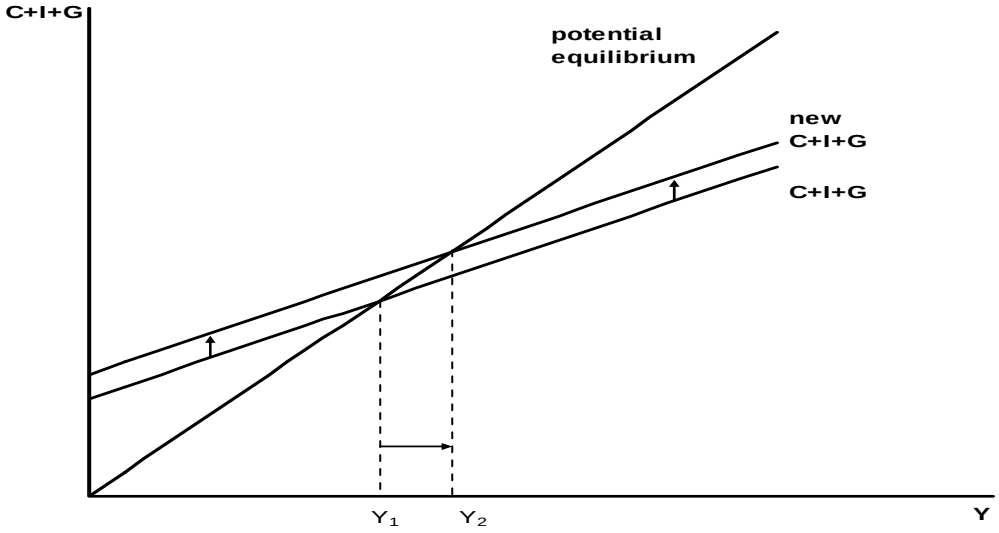
Problems

1. a. MPC tells how much C rises when Y rises by 1 dollar. If C now rises by .8 rather than .6, the C line gets steeper.
   b. The C line swings up causing total spending to swing up, so the C + I (or C + I + G) will intersect potential equilibrium at a higher level of Y. Y rises.
   c. The MPS must fall.
2. If taxes rise, the consumption shifts down. This causes total spending to shift down, and the equilibrium level of income falls from Y_1 to Y_2.



In the News

1. a. Probably not. The government is aware of the economic impact of its spending and taxes, but its spending program and not the economic impact of the deficit is its primary consideration.
   b. You can see in the graph that Y rises as a result. As taxes fall, C shifts up and at the same time, there is higher G raising total spending even more.



c. There are two possibilities. First, consumer spending may have fallen. This would be a reduction in autonomous expenditure. A second factor could be a reduction in investment by business. If business sees Y start to fall, then investment is likely to fall some too.
d. If the government wants to make Y rise, then greater spending or lowering taxes even more could be effective.
e. When I rises, the total spending line rises. In this case, we have the same graph as in question b.

Practice Test
1.a., 2.c., 3.d., 4.b., 5.b.