Econ 102 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Summer 2013

Answers to Quiz #4

Please write all answers neatly and legibly.

1. Suppose that an economy can be described with the following information:

C = 50 + .75(Y – T)

T = 20

G = 100

I = 60

X – M = 20

where C is consumption spending, Y is real GDP, T is autonomous taxes, G is government spending, I is investment spending, and (X – M) is net exports.

* 1. (1 point) Given the above information, what is the equilibrium level of real GDP in this economy? Assume that the aggregate price level is constant in this economy. Show your work for full credit.

Answer:

Y = C + I + G + (X – M)

Y = 50 + .75(Y – T) + 60 + 100 + 20

Y = 230 + .75(y – 20)

.25Y = 215

Y = 860

* 1. (1 point) Holding everything else constant, what is the equilibrium level of private saving in this economy? Show your work for full credit.

Answer:

C = 50 + .75(Y – T)

S = -50 + (.25)(Y – T)

S = -50 + .25(840)

S = 160

Let’s verify this by looking at Y = C + S + T

860 = 680 + 160 + 20: it checks out!

* 1. Suppose the full employment level of real GDP for this economy is 900. Given your answers in (a) and (b) and the above information answer this next set of questions.
     1. (1 point) This economy is in a (boom, recession).
     2. (1/2 point) This economy’s actual unemployment rate is (greater than, less than, equal to) the natural rate of unemployment.
     3. (1/2 point) Given the above information and holding everything else constant, if this economy attempts to produce at the full employment level of output inventories will (increase, decrease, be unchanged).
  2. (1 point) Suppose that policymakers in this economy decide to use government spending to reach the full employment level of output. What must the change in government spending be if the economy is to reach full employment, holding everything else constant? Show your work for full credit.

Answer:

Change in Y = (1/(1 – b))(Change in G)

40 = (1/(1 - .75))(Change in G)

40 = 4(Change in G)

Change in G = 10

Government spending must increase by 10 from 100 to 110. Let’s check this out:

Y = 50 + .75(Y – T) + I + G’ + (X – M)

Y = 50 + .75(Y – 20) + 60 + 110 + 20

.25Y = 225

Y = 900

* 1. (1 point) Suppose government policymakers decide to reach full employment solely through changes in autonomous taxes. Explain verbally whether taxes will need to be increased or decreased to reach this goal.

Answer:

Taxes will need to be decreased. When taxes are decreased this causes disposable income to increase and therefore consumption to increase. This will cause the aggregate expenditure line to shift up and provide a higher level of equilibrium real GDP.

1. (2 points) Suppose the loanable funds market is initially in equilibrium. Then suppose the government increases the size of the deficit. Holding everything else constant, what do you predict will happen to the level of private investment and the level of the interest rate?

Answer:

The demand for loanable funds curve will shift to the right as the government borrows to finance the deficit. This will result in an increase in the interest rate and a decrease in the level of investment.

1. (2 points) Suppose the loanable funds market is initially in equilibrium. Then suppose the trade deficit is reduced. Holding everything else constant, what do you predict will happen to the level of private investment and the level of the interest rate?

Answer:

The supply of loanable funds curve will shift to the left when the trade deficit is reduced holding everything else constant. This will cause the interest rate to increase and the level of investment to fall.