Economics 102
Summer 2018
Quiz #4 with Answers

Name ANNOTATED KEY

To get full credit on this quiz you must show your work and you must do your work neatly.

1. You are given the following information about an economy.

- Taxes, T, are autonomous and constant
- Transfers, TR, are autonomous and constant
- Investment spending, I, is autonomous and constant
- Government spending, G, is autonomous and constant
- Net Exports, X – IM, is autonomous and constant

You are also provided with this table of information where Y is real GDP and C is consumption spending.

Y	T	TR	C	I	G	X - IM
100	50	10	55	20	60	10
400	50	10	280	20	60	10

$Y-(T-TR)$
60
360 $\Big\}\ \Delta(Y-(T-TR)) = 300$

a. (2 points) Examine the given data and based on that data answer the following questions by circling your answer.
i. This economy has a trade [deficit, surplus]. $X > IM$
ii. This economy has [positive, negative, zero] capital inflows. $IM - X < 0 \Rightarrow KI < 0$
iii. This economy's government is operating with a [balanced budget, budget deficit, budget surplus]. $G - (T-TR) = 60 - (50-10) = 20$ $G > (T-TR) \Rightarrow$ BUDGET DEFICIT
iv. This economy's private saving is a [positive, negative] number when Y, or real GDP, is equal to 100. $Y = C + Sp + (T-TR)$ $5 = Sp$
$100 = 55 + Sp + 40$

b. (2 points) From the given information find the consumption function. Write the consumption function as a function of real GDP, Y. Show all your work for full credit.

$\Delta C = 280 - 55 = 225$
$\Delta(Y-(T-TR)) = 360 - 60 = 300$
$MPC = \frac{225}{300} = \frac{9}{12} = .75$

$C = a + .75[Y-(T-TR)]$
$55 = a + .75[60]$
$55 = a + 45$
$10 = a$

C as a function of disposable income

$C = 10 + .75[Y-(T-TR)]$

c. (2 points) Given the above information, what is the equilibrium level of real GDP for this economy? Show your work to get full credit for this question.

$Y = AE$ in Equilibrium
$Y = C + I + G + (X - IM)$
$Y = .75Y - 20 + 20 + 60 + 10$
$.25Y = 70$
$Y_e = 280$

$C = 10 + .75[Y - 40]$
$C = .75Y - 20$ ✱✱

d. (1 point) Suppose the full employment level of real GDP is equal to 320. Given the above information, suppose the government wishes to use government spending to reach the full employment level of real GDP. What must the new level of government spending, G', be? Show your work to get full credit for this question.

$Y_{fe} = 320$

$\Delta Y_{NEEDED} = Y_{fe} - Y_e = 320 - 280 = 40$

$\Delta Y = \left(\frac{1}{1-b}\right)(\Delta G)$

$40 = \left(\frac{1}{1-.75}\right)(\Delta G)$

$40 = 4(\Delta G)$

$10 = \Delta G \Rightarrow G' = 70!$

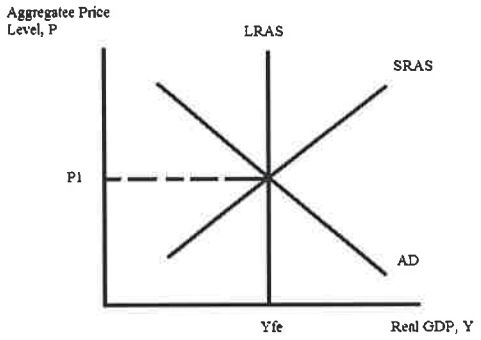
OR $Y' = C + I + G' + (X - IM)$

$320 = .75[320] - 20 + 20 + G' + 10$

$320 = 240 + G' + 10$

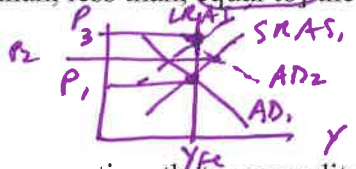
$70 = G'$

2. Consider an economy described by the following diagram where AD is the aggregate demand curve, SRAS is the short run aggregate supply curve, LRAS is the long run aggregate supply curve, and Yfe is the full employment level of real GDP.



a. (1 point) Suppose business confidence increases. In the short run this will cause (circle your answer):
i. [A movement along, A shift of] the aggregate demand curve. AD SHIFTS RIGHT
ii. [An increase, A decrease] in the aggregate price level relative to P1.
iii. An economic [contraction, expansion].

b. (1 point) Given (a), what do you predict about this economy in the long-run? Assume no government policy intervention.
i. The aggregate price level will ↑ relative to P1. (P_1 to P_3)
ii. The aggregate level of production will be [greater than, less than, equal to] the full employment level of real GDP. $Y_{fe} = Y_{fe}$
iii. The nominal wage will ↑.



c. (1 point) Suppose business confidence increases at the same time that commodity prices decrease. In the short run, what do you predict? Write a clear answer that includes your prediction about the effect of these changes on the AD/AS Model and the impact on the level of real GDP and the aggregate price level relative to their initial levels.

In the SR ⇒ AD shifts to right due to ↑ in business confidence; $SRAS_1$ shifts to $SRAS_2$ due to ↓ in commodity prices ⇒ Y ↑ from Y_{fe} ⇒ BOOM. Aggregate price level may ↑, ↓, or stay the same relative to P_1.