

2. An economy is currently in short-run equilibrium with a recessionary output gap of \$600 billion.
- (a) Draw a single correctly labeled graph with both the short-run and long-run Phillips curves. Label the initial short-run equilibrium point X.
- (b) Suppose the government implements fiscal policy in order to achieve full-employment output and the marginal propensity to consume is 0.75.
- (i) Calculate the minimum change in government spending required to increase aggregate demand by the amount of the output gap of \$600 billion. Show your work.
- (ii) Suppose instead the government wants to change taxes rather than government spending. Calculate the minimum change in taxes required to increase aggregate demand by the amount of the output gap of \$600 billion. Show your work.
- (c) Assume instead the government takes no policy action to close the output gap shown in part (a). Explain how the economy will adjust in the long run.

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**Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.**

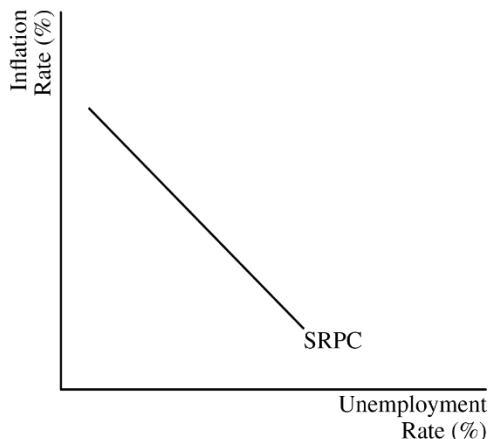
3. The government budget of the country of Geeland is currently balanced. The government budget is composed of tax revenues (T), transfer payments (TR), and government spending (G).
- (a) Assume the economy moves into a recession and there is no discretionary policy action.
- (i) Will the government budget move into a deficit or a surplus in the short run? Explain using the appropriate components of the government budget identified above.
- (ii) Based on your answer to part (a)(i), what will happen to the government debt?
- (b) Based on your answer to part (a)(i), identify one specific fiscal policy action that will balance the budget.
- (c) How will the fiscal policy action from part (b) affect the actual unemployment rate in the short run? Explain.
- (d) Did the government efforts to maintain a balanced budget make Geeland's recession more severe or less severe in the short run? Explain.

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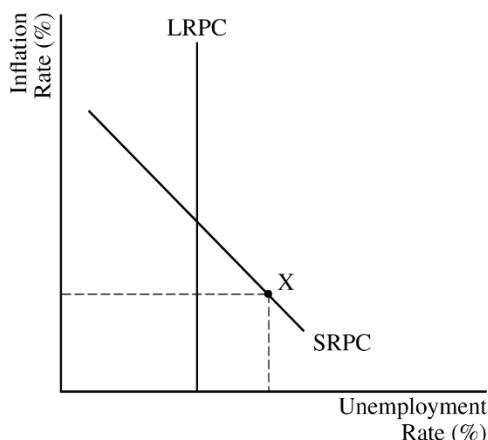
**Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.**

**Question 2: Short****5 points**

- (a) Draw a correctly labeled graph of the SRPC.

**1 point**

For the second point, the graph must include a correctly labeled LRPC and show point X on the SRPC to the right of the LRPC.

**1 point****Total for part (a) 2 points**

- (b) (i) Calculate the minimum change in government spending as \$150 billion and show your work.

**1 point**

$$\frac{\text{Change in GDP}}{\text{Spending Multiplier}} = \frac{\$600 \text{ billion}}{1/(1 - 0.75)} = \frac{\$600 \text{ billion}}{4} = \$150 \text{ billion}$$

- (ii) Calculate the minimum change in taxes as \$200 billion and show your work.

**1 point**

$$\frac{\text{Change in GDP}}{\text{Tax Multiplier}} = \frac{\$600 \text{ billion}}{-0.75/(1 - 0.75)} = \frac{\$600 \text{ billion}}{-3} = -\$200 \text{ billion}$$

**Total for part (b) 2 points**

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- (c) Explain that SRAS will increase in the long run due to a decrease in nominal wages, input prices, or inflationary expectations. **1 point**
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**Total for question 2 5 points**