Answers to Both Questions are located on the last 3 pages

1. Assume that the United States economy is currently operating at an equilibrium below full employment.
   (a) Draw a correctly labeled graph of aggregate demand and aggregate supply, and show each of the following.
      (i) Long-run aggregate supply
      (ii) Current equilibrium output and price level
   (b) Now assume a significant increase in the world price of oil, a major production input for the United States. Show on your graph in part (a) how the increase in the oil price affects each of the following in the short run.
      (i) Short-run aggregate supply
      (ii) Real output and price level
   (c) Given your answer in part (b), explain what will happen to unemployment in the United States in the short run.

1. (a) Using a correctly labeled aggregate supply and aggregate demand graph, show the impact of a sudden, large decrease in private investment spending on each of the following.

    (i) Output

    (ii) Price level

   (b) Using the results in part (a), explain how employment is affected.

   (c) Identify one specific fiscal policy that might be implemented to offset the effects of the decrease in investment, and explain how the policy would affect each of the following in the short run.

    (i) Aggregate demand

    (ii) Output and the price level

    (iii) Real interest rates

   (d) Identify an open-market operation that the central bank might implement to offset the effects of the decrease in investment, and explain how the policy would affect each of the following in the short run.

    (i) Real interest rates

    (ii) Aggregate demand

    (iii) Output and the price level

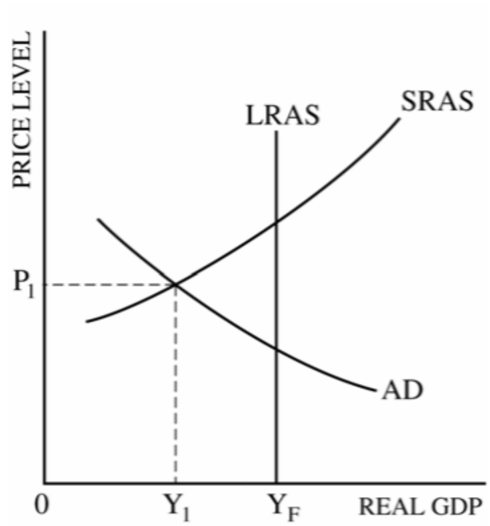
   (e) If the central bank continues the open-market operation described in (d), explain the long-run effects on each of the following.

    (i) Inflation

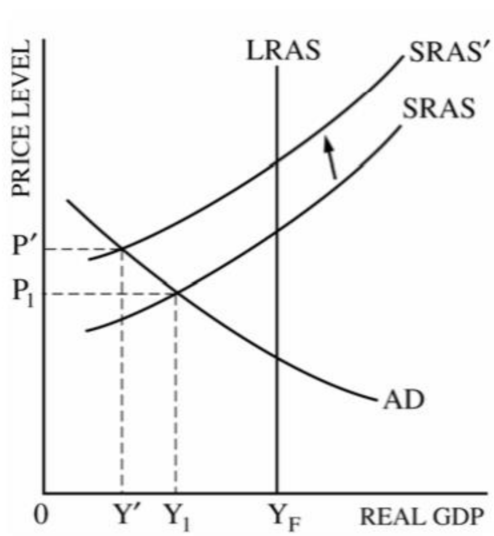
    (ii) Value of the domestic currency in foreign exchange markets

Answers

11 points (3 + 2 + 2 + 3 + 1)



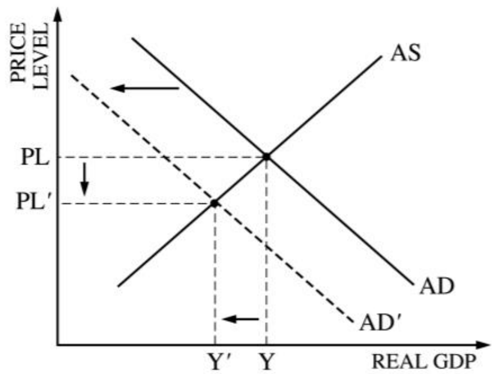
(a) 3 points:
- One point is earned for a correctly labeled AS/AD graph.
- One point is earned for showing a vertical LRAS.
- One point is earned for showing current output and price level below full employment.



(b) 2 points:
- One point is earned for showing a leftward shift of the SRAS curve.
- One point is earned for showing that real output falls and price level rises.

(c) 2 points:
- One point is earned for stating that unemployment increases.
- One point is earned for explaining that the cause is the decrease in real output.

Correct Answer:



(a) Investment is a component of aggregate demand, so when investment decreases, AD decreases (shifts left) as indicated on the graph above. This decreases output from Y to Y', and the price level falls from PL to PL'.

(b) Employment rises and falls with the (real) output level. In this case employment will decrease because output decreases.

(c) To offset the effects of the decrease in investment, the government could increase its expenditures (G) **or decrease taxes**. **With an increase in G**, AD will increase **since G is a componenet of AD.** The increase in AD will increase output and the price level. Increases in government borrowing in the loanable funds market will increase the interest rate, as will increases in the demand for money resulting from increases in income.

(d) The central bank could buy government bonds to increase the money supply. The increase in the money supply will cause real interest rates to fall. AD will increase because investment and interest-sensitive consumption will both increase, and both investment and consumption are components of AD. The increase in AD will cause the price level and output to increase.

(e) If the central bank continues to increase the money supply, the price level will continue to increase as explained in part (d), resulting in an increase in inflation. The higher price level and lower interest rate that result from an increase in the money supply will make domestic prices and interest rates relatively unattractive. The domestic currency will be exchanged for foreign currency by those wishing to purchase goods and invest capital elsewhere, and less domestic currency will be demanded by foreigners, causing a devaluation of the domestic currency in foreign exchange markets.

(a) 3 points	(1 for the graph, 1 for P, and 1 for Q) 1 point: correctly labeled graph with shift 1 point: output will decrease 1 point: price level will decrease
(b) 1 point	Employment will decrease because output decreases.
(c) 4 points	(1 for the policy and 1 for explaining the changes in parts (i), (ii), (iii)) 1 point: correct policy - increase G or decrease taxes (T) 1 point: AD increases (shifts to the right) because G increases or T decreases, since both G and C (which increases when T decreases) are components of AD 1 point: output and price level increase because AD increases 1 point: real interest rate increases because government borrowing in the loanable funds market increases the interest rate. Also, the increase in income increases the demand for money, which raises the interest rate.
(d) 4 points	(1 point for the policy and 1 point each for each of the explanations) 1 point: the central bank buys government bonds to increase the money supply 1 point: real interest rate decreases because the money supply increases 1 point: AD increases because investment spending and interest sensitive consumption spending will both increase, and I and C are components of AD 1 point: output and price level will increase because AD has increased
(e) 2 points	1 point: inflation rises because of the increase in the money supply 1 point: the value of the domestic currency will decrease because the interest rate is lower and the price level is higher relative to the rest of the world