

QUEEN'S UNIVERSITY AT KINGSTON

FACULTY OF ARTS AND SCIENCE

Department of Economics

ECONOMICS 112

Final Examination

Fall 2019

Course Sections and Instructors:

Econ 112 – Meng Li

Time Limit: 3 Hours

Permitted Calculator:

Pre-Approved: Casio 991

Instructions:

Part A:

- Mark your selections in PENCIL on the Scantron Answer Sheet. Fill in the appropriate rectangle completely but stay within its limits.
- There is only one correct answer for each question; multiple answers will be marked as incorrect. If you make changes, be sure to erase completely.
- Please record your **Student Number, Name, and Test Form A** in the appropriate sections of the Answer Sheet. For detailed instructions on filling in this information see the next page.

Parts B and C: Use answer booklet provided to answer parts B and C.

Marking Scheme:

Part A [60 marks] FORTY Multiple-Choice Questions - 1.5 marks each

Part B [20 marks] FOUR of SIX True/False/Uncertain Questions - 5 marks each

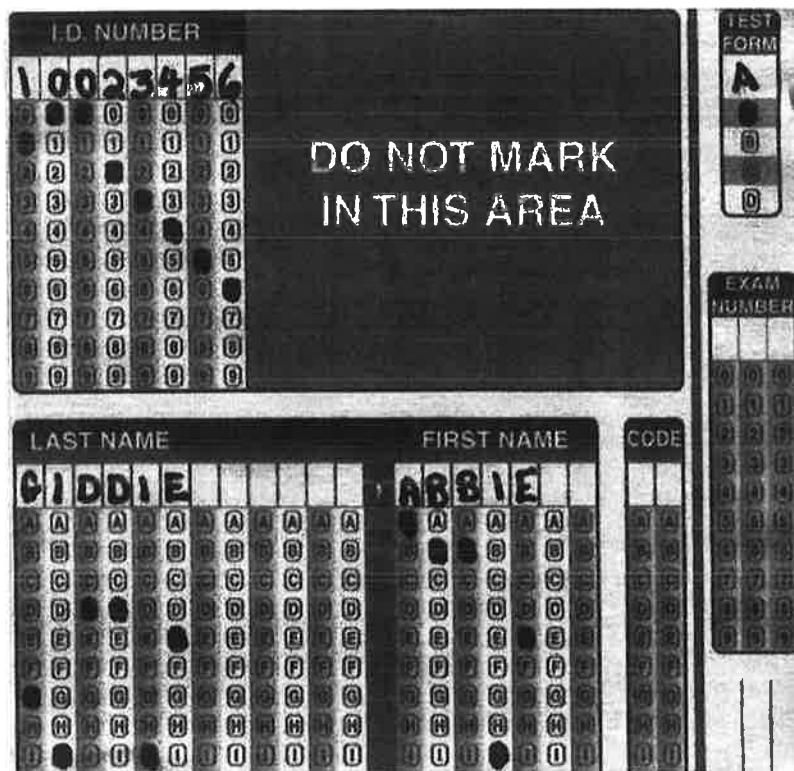
Part C [20 marks] ONE of TWO Problems - 20 marks

Notes:

- Proctors are unable to respond to queries about the interpretation of exam questions. Do your best to answer exam questions.
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Before You Begin the Exam:

1. Write your Student # under "**I.D. Number**" on the Answer Sheet and fill in the appropriate rectangle below each number. (See the example below).
2. Print your **Last Name** followed by **first name** in the appropriate space and fill in the appropriate rectangle under each letter. (If your name is too long to fit in the spaces provided, please enter as many letters as you can.) See example below.
3. Under "**Test Form**", fill in "A".



PART A: Multiple Choice Questions

Choose the one alternative that best completes the statement or answers the question. There are forty questions in the section, and you must answer ALL of them.

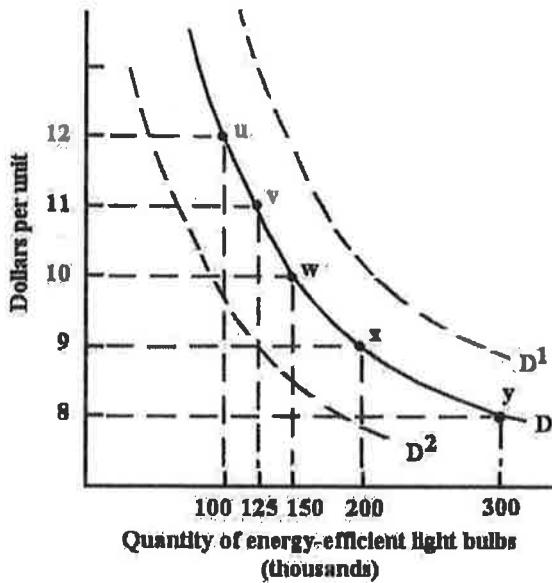


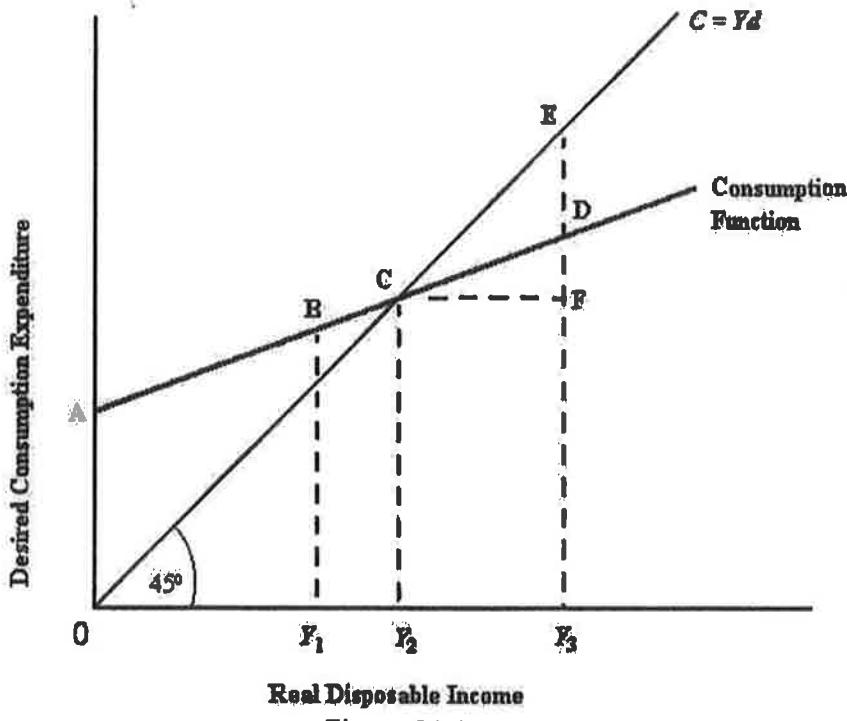
Figure 3-1

- 1) Refer to Figure 3-1. If demand is given by the curve D , the _____ energy-efficient light bulbs is **200,000** at a price of \$9.
 - A) quantity sold of
 - B) demand for
 - C) demand schedule for
 - D) quantity demanded of
 - E) quantity purchased of

- 2) Refer to Figure 3-1. The movement along the demand curve, D , from point v to point x , could be caused by
 - A) a change in the price of energy-efficient light bulbs.
 - B) a change in preferences away from ordinary light bulbs to energy-efficient light bulbs.
 - C) a change in the price of ordinary light bulbs.
 - D) an expectation that new, government regulations will require the use of energy-efficient light bulbs only.
 - E) an increase in household income, which allows consumers to purchase more light bulbs.

- 3) Refer to Figure 3-1. A shift of the demand curve for energy-efficient light bulbs from D to D^2 could be caused by
 - A) a news bulletin stating that energy-efficient light bulbs emit a harmful gas.
 - B) an increase in the price of ordinary light bulbs.
 - C) a decrease in the price of energy-efficient light bulbs.
 - D) an expectation that new government regulation will require the use of energy-efficient light bulbs only.
 - E) a change in preferences away from ordinary bulbs to energy-efficient bulbs.

- 4) Refer to Figure 3-1. A shift of the demand curve for energy-efficient light bulbs from D to D¹ could be caused by
- A) a decrease in the price of ordinary light bulbs.
 - B) a news bulletin stating that energy-efficient light bulbs emit a harmful gas.
 - C) a change in preferences toward ordinary light bulbs.
 - D) a decrease in the price of energy-efficient light bulbs.
 - E) an expectation that government regulation will soon prohibit the use of ordinary light bulbs.
- 5) Consider a local market for 4-litre containers of windshield-wiper fluid. In January 2015, 100 000 containers were sold at a price of \$3 each. In March 2015, 120 000 containers are sold at a price of \$8 each. Does this change in equilibrium price and quantity violate the "law of demand"?
- A) Not necessarily, because the demand curve could have shifted to the right, leading to an increase in equilibrium price and quantity.
 - B) Not necessarily, because the supply curve could have shifted to the left, leading to an increase in equilibrium price and quantity.
 - C) Not necessarily, because the supply curve could have shifted to the right, leading to an increase in equilibrium price and quantity.
 - D) Not necessarily, because the demand curve could have shifted to the left, leading to an increase in equilibrium price and quantity.
 - E) No, because the "law of demand" is not valid.



Real Disposable Income

Figure 21-1

- 6) Refer to Figure 21-1. The APC will be equal to one (1.0) when disposable income is equal to
- Y_2 .
 - desired saving.
 - Y_1 .
 - 0.
 - Y_3
- 7) Refer to Figure 21-1. The marginal propensity to consume is equal to
- ED/Y_2Y_3 .
 - EF/Y_2Y_3 .
 - EF/DF .
 - ED/CF .
 - DF/Y_2Y_3 .
- 8) The Smith family's disposable income rose from \$40 000 per year to \$42 000 and his desired consumption expenditure rose from \$38 000 to \$39 600. It can be concluded that their
- marginal propensity to consume increased from 0.050 to 0.058.
 - marginal propensity to save is 0.80.
 - average propensity to consume decreased from 0.950 to 0.943.
 - marginal propensity to consume is 0.050.
 - average propensity to save decreased from 0.950 to 0.943.

- 9) Consider the simplest macro model with demand-determined output, where $AE = C + I$. Suppose that actual national income is \$900 billion and desired consumption plus desired investment is \$920 billion. We can expect that
- A) firms will see a decrease in inventories, and they will respond by increasing output, thereby increasing actual national income.
 - B) firms will decrease autonomous investment by \$20 billion until equilibrium national income is reached at \$900 billion.
 - C) firms will increase autonomous investment by \$20 billion until equilibrium national income is reached at \$920 billion.
 - D) firms will see an increase in inventories, and they will respond by decreasing output, thereby decreasing actual national income.
 - E) actual national income will decrease until equilibrium national income is reached at \$900 billion.
- 10) Suppose aggregate output is demand-determined. If the simple multiplier is 4 and there is a \$10 billion increase in planned investment spending, then equilibrium income will _____ and the marginal propensity to spend must equal _____.
- A) increase by \$10 billion; 4.0
 - B) decrease by \$40 billion; 0.75
 - C) decrease by \$10 billion; 0.25
 - D) increase by \$40 billion; 0.75
 - E) increase by \$40 billion; 0.25
- 11) Consider the simplest macro model with a constant price level and demand-determined output. The equations of the model are: $C = 60 + 0.43Y$, $I = 150$, $G = 260$, $T = 0$, $X = 90$, $IM = 0.06Y$. The marginal propensity to spend on national income, z, is
- A) 0.43. B) 0.06. C) 0.49. D) 0.63. E) 0.37.

The diagram below shows desired aggregate expenditure for a hypothetical economy. Assume the following features of this economy:

- marginal propensity to consume (mpc) = 0.80
- net tax rate (t) = 0.15
- no foreign trade
- fixed price level
- all expenditure and income figures are in billions of dollars.

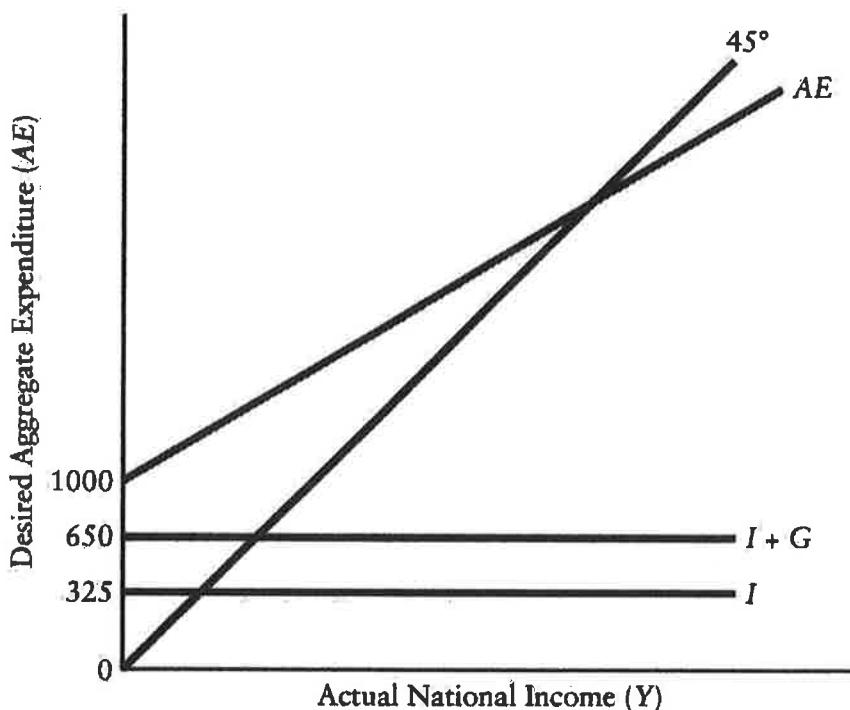


FIGURE 22-3

- 12) Refer to Figure 22-3. What is the level of autonomous consumption?
- A) \$0 B) \$325 C) \$650 D) \$1000 E) \$350
- 13) Refer to Figure 22-3. Which of the following correctly describes the consumption function for this economy?
- A) $C = 325 + (0.65)Y$
 B) $C = 350 + (0.68)Y_D$
 C) $C = 1000 + (0.80)Y_D$
 D) $C = 1000 + (0.80)Y$
 E) $C = 350 + (0.68)Y$

- 14) Refer to Figure 22-3. Which of the following equations describes the aggregate expenditure function for this economy?
- A) $AE = 1000 + (0.80)Y + 0.15 YD$
 - B) $AE = 1975 + (0.65)Y$
 - C) $AE = 1000 + (0.80)Y_D$
 - D) $AE = 1975 + (0.68)Y$
 - E) $AE = 1000 + (0.68)Y$
- 15) Refer to Figure 22-3. What is the marginal propensity to spend (z) in this economy?
- A) 0.68
 - B) 0.80
 - C) 0.48
 - D) 0.65
 - E) 0.45
- 16) Consider a simple macro model with demand-determined output. An exogenous increase in the domestic price level will
- A) pivot the net export function and the AE curve upward.
 - B) shift both the net export function and the AE curve downward.
 - C) shift both the net export function and the AE curve up
 - D) shift the net export function downward and the AE curve upward.
 - E) shift the net export function upward and the AE curve downward.

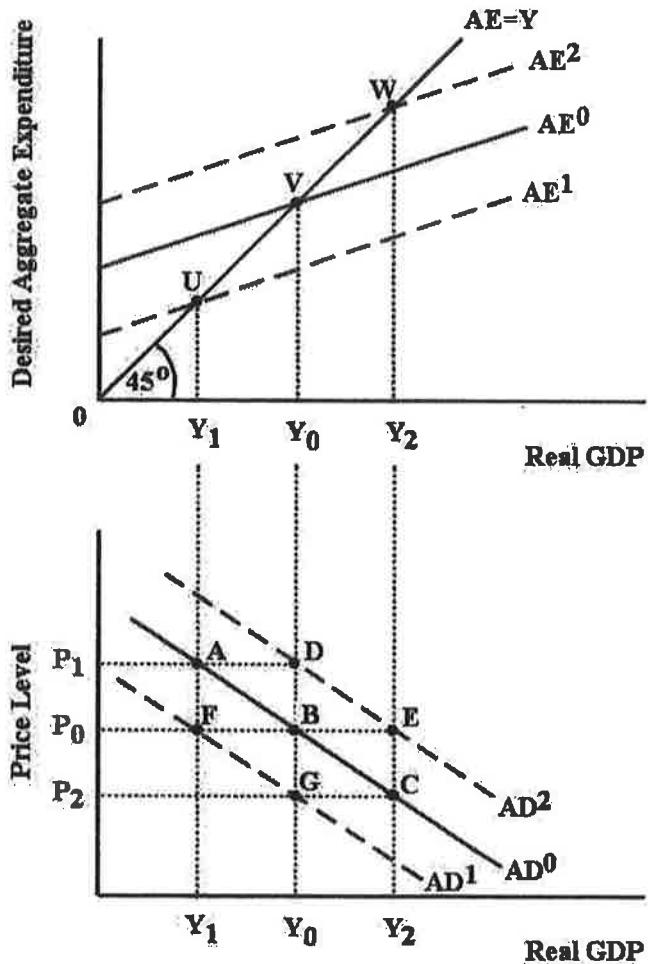


Figure 23-1

- 17) Refer to Figure 23-1. Assume the economy is initially in equilibrium with desired aggregate expenditure equal to real GDP at point V. The price level is P_0 . The corresponding point on the aggregate demand curve is point
- A.
 - B.
 - C.
 - D.
 - E.
- 18) Refer to Figure 23-1. Assume the economy is initially in equilibrium with desired aggregate expenditure equal to real GDP at point V. The price level is P_0 . Now, suppose there is an exogenous rise in the price level to P_1 . Which of the following statements describes the likely macroeconomic effects?
- The AE curve shifts to AE^2 , a new equilibrium is established at point W, and the AD curve shifts from AD^0 to AD^1 , and equilibrium moves from point B to point D.
 - The AE curve shifts to AE^2 , a new equilibrium is established at point W, and the economy moves from point B to point C along AD^0 .
 - The AE curve shifts to AE^1 , a new equilibrium is established at point U, and the economy moves from point B to point A along AD^0 .
 - The AE curve shifts to AE^1 , a new equilibrium is established at point U, and the AD curve shifts from AD^0 to AD^1 , and equilibrium moves from point B to point D.

- 19) Consider two economies, A and B. Economy A has a marginal propensity to consume of 0.9, a net tax rate of 0.1 and a marginal propensity to import of 0.1. Economy B has a marginal propensity to consume of 0.6, a net tax rate of 0.2 and a marginal propensity to import of 0.2. Suppose there is a decrease in autonomous investment of \$5 billion in each of these economies. Which of the following statements is true?
- A) The AD curve shifts to the left the same amount in both economies.
 - B) The simple multiplier is larger in Economy B.
 - C) The AD curve shifts farther to the right in Economy A than Economy B.
 - D) The AD curve shifts farther to the left in Economy A than Economy B.
 - E) The AD curve shifts to the right the same amount in both economies.
- 20) Consider the basic AD/AS model. If firms' unit costs remained constant as firms increased their output levels, this would lead to a
- A) horizontal AD curve.
 - B) vertical AD curve.
 - C) vertical AS curve.
 - D) horizontal AS curve.
 - E) horizontal AE curve.
- 21) Which of the following would cause a positive aggregate demand shock, but leave the aggregate supply curve unaffected?
- A) A free trade agreement between Canada and Europe that leads Canadian businesses to increase investment expenditures.
 - B) An improvement in the computer literacy of workers.
 - C) A medical report confirming that improved health for Canadian workers caused fewer lost days of production.
 - D) A severe drought lasting for six months that destroys agricultural and forestry production.
 - E) A substantial increase in world oil prices.
- 22) If the economy is in macroeconomic equilibrium with a vertical *AS* curve, and then aggregate demand increases, we expect the *AE* function to shift to a
- A) lower level and stay there.
 - B) higher level, but then shift part of the way down to its original position as the price level rises.
 - C) higher level but then return to its original position as the price level rises.
 - D) higher level and stay there.
 - E) lower level, but then return to its original position as the price level rises.

- 23) Consider the AD/AS macro model. Suppose there is an increase in aggregate demand and, simultaneously, a decrease in aggregate supply. The result will be a
- rise in real GDP but price level changes will be indeterminate.
 - rise in real GDP and a rise in the price level.
 - an indeterminate change in real GDP and a rise in the price level.
 - rise in real GDP and a fall in the price level.
 - an indeterminate change in real GDP and a fall in the price level.
- 24) Consider the following news headline: "World commodity prices rise sharply." Choose the statement below that best describes the likely macroeconomic effects in Canada. (Remember that Canada is both a producer and a consumer of commodities.)
- the AD curve shifts to the left and the AS curve shifts to the right; the price level falls and the effect on real GDP is indeterminate
 - the AD curve shifts to the right and the AS curve shifts to the left; the price level rises and the effect on real GDP is indeterminate
 - there is no change in either the AD or the AS curve
 - the AD and AS curves both shift to the left; the effect on the price level is indeterminate and real GDP decreases
 - the AD and AS curves both shift to the right; the effect on the price level is indeterminate and real GDP increases
- 25) Consider the basic AD/AS macro model in long-run equilibrium. An expansionary AD shock will _____ the price level and _____ output in the short run. In the long run, the price level will _____ and output will _____.
- increase; increase; increase further; increase further
 - increase; increase; increase further; be restored to potential output
 - decrease; decrease; decrease further; decrease further
 - decrease; decrease; decrease further; be restored to potential output
 - increase; decrease; increase further; be restored to potential output
- 26) Suppose Canada's economy is in a long-run equilibrium with real GDP equal to potential output. Now suppose there is an increase in the Canadian-dollar price of all imported raw materials. In the short run, _____. In the long run, _____.
- real GDP falls and the price level rises; real GDP and the price level return to their original levels
 - real GDP and the price level both fall; real GDP is below its original level with a lower price level
 - real GDP rises and the price level falls; real GDP returns to its original level with a lower price level
 - real GDP and the price level both rise; real GDP is above its original level with a higher price level
 - real GDP and the price level both rise; real GDP returns to its original level with a higher price level
- 27) Consider the basic AD/AS model and suppose there is a negative output gap. If an expansionary fiscal policy is pursued and the AS curve shifts leftward unexpectedly, the fiscal policy maybe____ and real GDP may____ potential GDP.
- too weak; rise above
 - too strong; rise above
 - appropriate; equal
 - too strong; stay below
 - too weak; stay below

- 28) Consider a simple macro model with demand-determined output. Which of the following parameters will produce the most stable real GDP in the face of autonomous expenditure shocks?
- A) $MPC = 0.8, t = 0.2, m = 0.3$
 - B) $MPC = 0.9, t = 0.2, m = 0.4$
 - C) $MPC = 0.7, t = 0.3, m = 0.2$
 - D) $MPC = 0.8, t = 0.1, m = 0.2$
 - E) $MPC = 0.7, t = 0.1, m = 0.4$
- 29) When there is an excess demand for money balances, monetary equilibrium is established by a process that involves
- 1) movement down the money demand function;
 - 2) interest rates falling;
 - 3) the price of bonds falling.
- A) 1 only
 - B) 2 only
 - C) 3 only
 - D) 1 and 2
 - E) 2 and 3
- 30) A decrease in the money supply is most likely to
- A) lower interest rates, raise investment, and raise aggregate expenditures.
 - B) raise interest rates, lower investment, and lower aggregate expenditures.
 - C) lower interest rates, investment, and aggregate expenditures.
 - D) raise interest rates, investment, and aggregate expenditures.
 - E) raise interest rates and investment, and lower aggregate expenditures.

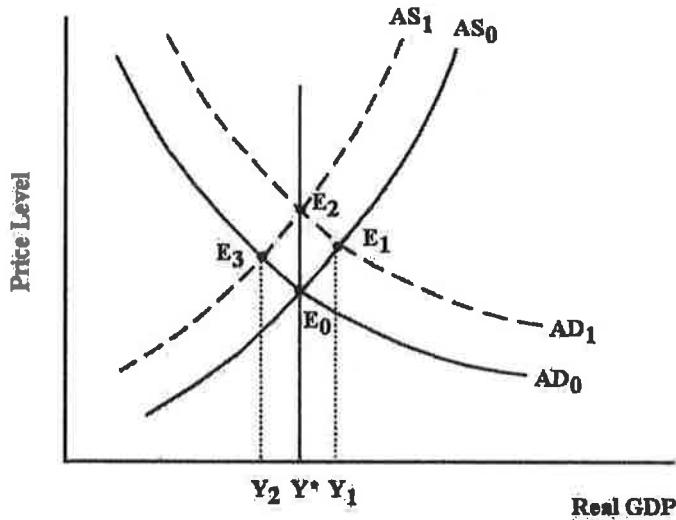


Figure 27-4

- 31) Refer to Figure 27-4. The economy begins in equilibrium at E₀. Now consider an expansion of the money supply. The *initial effect* is
- no change in the short-run equilibrium or level of real GDP.
 - a shift of the AD curve to AD₁, and then a shift back to AD₀ to restore equilibrium at E₀.
 - a simultaneous shift of AD to AD₁ and AS to AS₁, resulting in a new equilibrium at E₂.
 - a shift of the AD curve to AD₁ and an increase in real GDP to Y₁.
 - a shift of the AS curve to AS₁ and a decrease in real GDP to Y₂.
- 32) Refer to Figure 27-4. The economy begins in equilibrium at E₀. Now consider an expansion of the money supply. What is the adjustment toward the new long-run equilibrium?
- The AD curve shifts to AD₁. The inflationary gap causes prices to rise, AS shifts to AS₁ and equilibrium is restored at E₃.
 - The AD curve shifts to AD₁. The increased money supply causes an increase in potential output and a new long-run equilibrium at E₁.
 - The AD and AS curves shift to AD₁ and AS₁ simultaneously. The increased price level pushes them back to AD₀ and AS₀ and equilibrium is restored at E₀.
 - The AD curve shifts to AD₁. The inflationary gap causes wages to rise, AS shifts to AS₁ and equilibrium is restored at E₂.
 - The AS curve shifts to AS₁ which causes the AD curve to shift to AD₁, resulting in a new equilibrium at E₂.

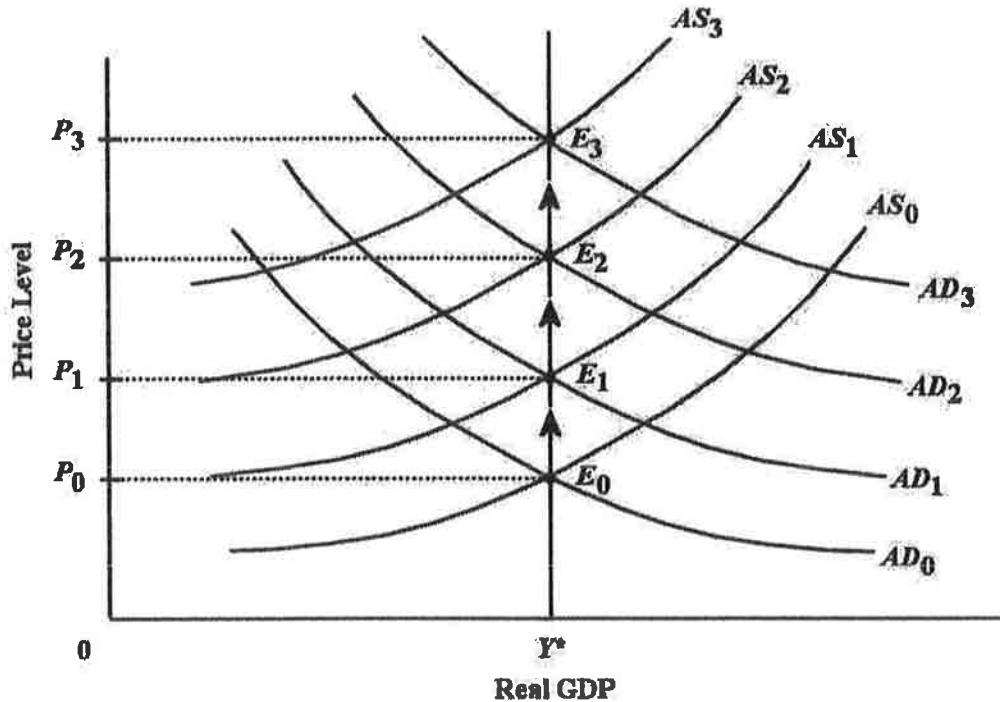


Figure 29-1

33) Refer to Figure 29-1. Assume there are no demand or supply shocks present in this analysis. What explains the movement of the AS curve from AS_0 to AS_1 to AS_2 and so on?

- A) expectations of inflation are causing a perpetual inflationary output gap
- B) expectations of inflation are causing wage costs to rise continually
- C) the AS curve shifts up as potential GDP (Y^*) is continuously rising
- D) unit costs are rising because real wages are rising faster than nominal wages
- E) unit costs are rising due to excess demand for labour

34) Refer to Figure 29-1. What explains the movement of the AD curve from AD_0 to AD_1 to AD_2 and so on?

- A) the process of disinflation
- B) the central bank is attempting to reduce inflation by removing monetary validation
- C) increasing nominal wages cause desired consumption to increase, shifting the AD curve to the right
- D) the central bank is increasing the money supply and validating the inflationary expectations
- E) desired investment is increasing, shifting the AD curve to the right

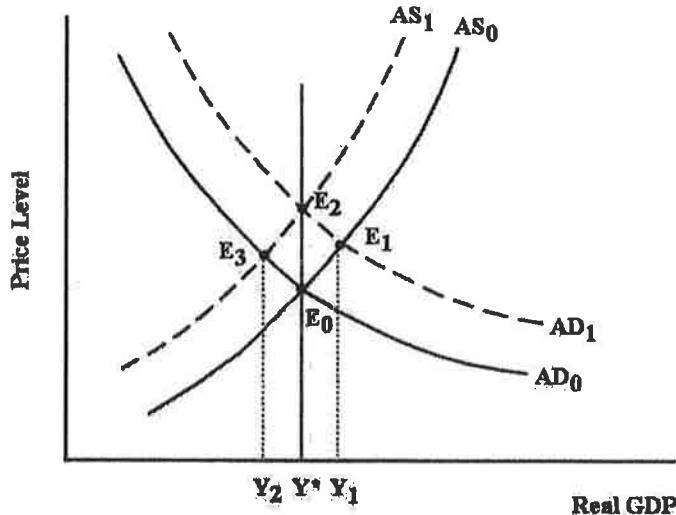


Figure 27-4

- 35) Refer to Figure 27-4. The economy begins in equilibrium at E₀. Now consider an expansion of the money supply. What is the long-run effect of this change?
- higher real GDP
 - no change in price level or real GDP
 - a higher price level and higher real GDP
 - a higher price level
 - lower real GDP
- 36) Consider the market in which Canadian dollars are exchanged for British pounds. An increased preference of British consumers for Canadian goods would
- shift the supply-of-pounds curve to the right and lead to a fall in the exchange rate.
 - shift the demand-for-pounds curve to the right and lead to a rise in the exchange rate.
 - lead to a temporary excess demand for British pounds on the international currency market.
 - shift the supply-of-pounds curve to the left and lead to a rise in the exchange rate.
 - shift the demand-for-pounds curve to the left and lead to a fall in the exchange rate.

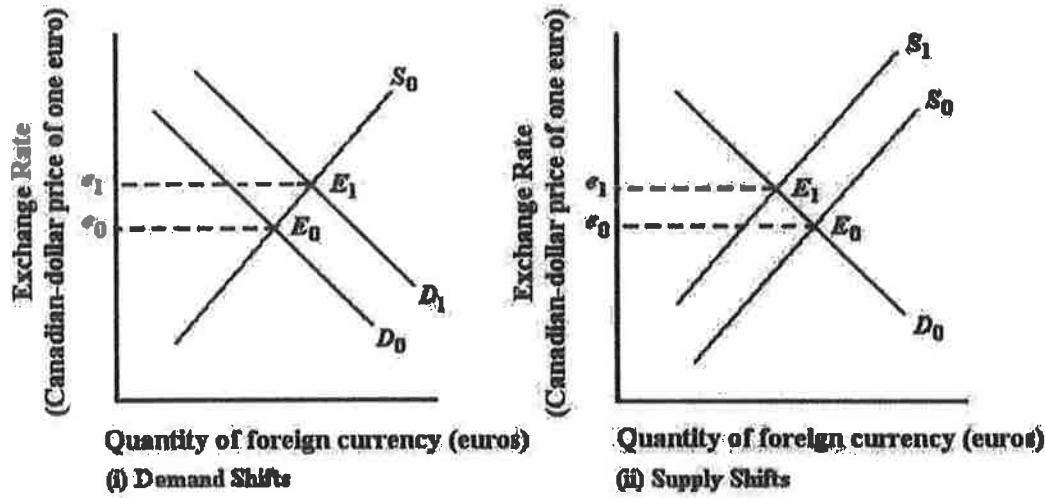


Figure 34-3

- 37) Refer to Figure 34-3. An increase in demand or decrease in the supply of foreign exchange will
- encourage Europeans to buy fewer Canadian goods.
 - cause the Canadian dollar to depreciate.
 - have no effect on the exchange rate.
 - encourage Canadians to buy more European goods.
 - cause the Canadian dollar to appreciate.
- 38) Refer to Figure 34-3. An increase in demand for foreign exchange OR a decrease in the supply of foreign exchange may be due to
- increased preference for Canadian goods.
 - equal rates of inflation.
 - domestic inflation in excess of foreign inflation.
 - foreign inflation in excess of domestic inflation.
 - more Europeans travelling to Canada.

- 39) Assume exchange rates are flexible. When the quality of one country's products is improving more rapidly than the quality of the products produced in the rest of the world, there will be a tendency, *ceteris paribus*, for
- A) the country's inflation rate to rise relative to the rest of the world.
 - B) that country's currency to depreciate.
 - C) that country's currency to appreciate.
 - D) short term capital to flow out of the country.
 - E) the country's interest rates to rise relative to the rest of the world.
- 40) Consider a country that is operating under a system of flexible exchange rates. If the central bank in this country imposes an expansionary monetary policy, it would be likely to experience
- 1) a depreciation of its currency;
 - 2) short-term capital outflows;
 - 3) an appreciation of its currency.
- A) 1 only
 - B) 2 only
 - C) 3 only
 - D) 1 and 2
 - E) 2 and 3

Part B: True/False/Uncertain Questions (20 marks)

Explain why the following statement is True, False, or Uncertain according to economic principles. A diagram or(and) a few lines of explanation should be enough. **No credit is given for unsupported answers.**

Answer **FOUR** of the following **SIX** questions. Each question is worth 5 marks.

B1. If Canada can produce 4 cars or 2 trucks with 1 unit of resource, and the US can produce 8 cars or 2 trucks with one unit of resource, there are no potential gains from trade, because the US is better at producing both goods.

B2. A decrease in the demand of money reduces Canadian interest rates and leads to an outflow of financial capital. This causes the Canadian dollar to appreciate.

B3. If wages are downwardly sticky, the economy's adjustment process is fast and will quickly eliminate a recessionary gap.

B4. A demand shock that is validated will produce temporary inflation, and the economy eventually restores potential GDP and stable prices.

B5. Suppose an economy is currently operating with a recessionary gap, this economy will not return to its long run equilibrium without some policy response.

B6. In an open economy like Canada's, a policy-induced increase in the government's budget deficit tends to crowd out foreign capital investments and increase net exports.

Part C: Problem-solving Questions (20 marks)

Answer ONE of the following TWO questions.

Read each part of the question very carefully. Answer all parts and show all the steps of your calculations to get full credit. Use diagrams when required.

C1

Consider the following aggregate expenditure model of the economy:

$$C = 75 + 0.9Yd$$

$$I = 80$$

$$G = 50$$

$$T = 0.2Y$$

$$X = 60$$

$$M = 5 + 0.12Y$$

Where C is consumption, Yd is disposable income, I is investment, G is government expenditures on goods and services, T is tax net of transfers, X is exports, M is imports and Y is national income.

- (A) Solve for aggregate expenditures (AE) as a function of Y and calculate the equilibrium level of national income. Illustrate your equilibrium in a diagram with AE on the vertical axis and Y on the horizontal axis. What is the value of the multiplier? Is the government running a surplus or deficit? (4 marks)
- (B) Using the value of the multiplier that you have found, explain what happens to the value of AE and to GDP if the government increases its expenditures from 50 to 100 (this is an expansionary fiscal policy). How does this policy affect the government's budget balance? (4 marks)
- (C) Using diagram(s) explain why the changes of AE and GDP will be less than what is predicted in part (B) when aggregate supply (AS) curve is upward sloping. (4 marks)
- (D) Suppose that the economy was already at its potential output (Y^*) in part (A). Using an AD-AS diagram, predict the effects of the fiscal policy on real GDP, the unemployment rate, and the price level in the short run and in the long-run. (4 marks)
- (E) Explain what effect this policy is likely to have on domestic real interest rates in the country. Would we expect to see an appreciation or a depreciation of the domestic currency? (4 marks)

C2. (Graphs required)

- (A) If a reduction in oil output in foreign countries, what is the likely effect on Canadian aggregate demand? national income? price level? What would be the likely response by the Bank of Canada? (4marks)
- (B) Explain what happens to aggregate expenditure and aggregate demand subsequent to a decrease in money supply. Be sure to discuss all mechanisms at work. (4 marks)
- (C) Explain the neutrality of money. (4 marks)
- (D) Explain how flexible exchange rates can act as a shock absorber in response to shocks to the terms of trade. (4 marks)
- (E) When does constant inflation with $Y=Y^*$ occur? Briefly explain the logic behind the notion of a self-fulfilling prophecy in this context. (4 marks)