AP® Macroeconomics Exam

SECTION I: Multiple Choice

2016

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At a Glance

Total Time
1 hour, 10 minutes
Number of Questions
60
Percent of Total Score
66.67%
Writing Instrument
Pencil required
Electronic Device
None allowed

Instructions

Section I of this exam contains 60 multiple-choice questions. Fill in only the circles for numbers 1 through 60 on your answer sheet.

Indicate all of your answers to the multiple-choice questions on the answer sheet. No credit will be given for anything written in this exam booklet, but you may use the booklet for notes or scratch work. After you have decided which of the suggested answers is best, completely fill in the corresponding circle on the answer sheet. Give only one answer to each question. If you change an answer, be sure that the previous mark is erased completely. Here is a sample question and answer.

Sample Question	Sample Answer
Chicago is a (A) state (B) city (C) country (D) continent (E) village	Ⓐ ● Ⓒ Ⓓ Ⓔ

Use your time effectively, working as quickly as you can without losing accuracy. Do not spend too much time on any one question. Go on to other questions and come back to the ones you have not answered if you have time. It is not expected that everyone will know the answers to all of the multiple-choice questions.

Your total score on the multiple-choice section is based only on the number of questions answered correctly. Points are not deducted for incorrect answers or unanswered questions.

Form I
Form Code 4MBP4-S

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MACROECONOMICS

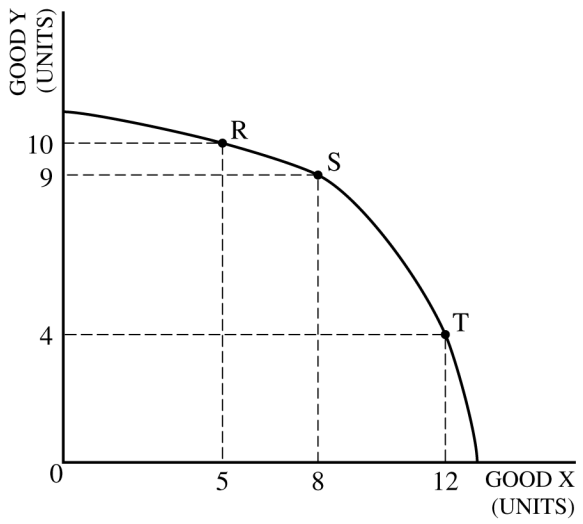
Section I

Time—70 minutes

60 Questions

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case and then fill in the corresponding circle on the answer sheet.

Question 1 is based on the diagram below, which shows the production possibilities curve for an economy that produces only two goods: X and Y.



1. The opportunity cost of moving production from point R to point T is

   (A) one unit of Good Y
   (B) five units of Good Y
   (C) six units of Good Y
   (D) three units of Good X
   (E) seven units of Good X

2. If a country's production possibilities curve is shifting outward, which of the following must be true?

   (A) There is cyclical unemployment.
   (B) The price level is increasing.
   (C) The aggregate demand curve is shifting to the right.
   (D) The long-run Phillips curve is shifting to the right.
   (E) The long-run aggregate supply curve is shifting to the right.

3. In a closed economy with lump sum taxes, if the marginal propensity to consume increased from 0.5 to 0.75, the simple spending multiplier and the marginal propensity to save (MPS) would change in which of the following ways?

	Multiplier	MPS
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	No change	Decrease
(D)	Decrease	Increase
(E)	Decrease	Decrease

Year	Nominal GDP	Price Index
2012	$100,000	200
2013	$110,000	220

4. The table above shows the nominal gross domestic product (GDP) and the price index for an economy during the period 2012 and 2013. Which of the following would have occurred from 2012 to 2013 ?

   (A) Real GDP decreased by 20%.
   (B) Real GDP decreased by 10%.
   (C) Real GDP increased by 20%.
   (D) Real GDP increased by 10%.
   (E) Real GDP did not change.

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5. The equilibrium real interest rate in Britain increases to 8 percent while the equilibrium real interest rate in Australia remains at 4 percent. As a result, financial capital will flow from

   (A) Britain to Australia, increasing the interest rate in Britain and decreasing the interest rate in Australia
   (B) Britain to Australia, decreasing the interest rate in Britain and increasing the interest rate in Australia
   (C) Australia to Britain, increasing the interest rate in Britain and decreasing the interest rate in Australia
   (D) Australia to Britain, decreasing the interest rate in Britain and decreasing the interest rate in Australia
   (E) Australia to Britain, decreasing the interest rate in Britain and increasing the interest rate in Australia

6. When a central bank conducts open-market bond sales, the money supply, interest rate, and aggregate demand will change in which of the following ways in the short run?

	Money Supply	Interest Rate	Aggregate Demand
(A)	Decrease	Increase	Decrease
(B)	Decrease	Decrease	Increase
(C)	Decrease	Increase	Increase
(D)	Increase	Decrease	Increase
(E)	Increase	Decrease	Decrease

7. If the central bank holds interest rates constant, an autonomous decrease of $10 million in investment spending will most likely result in

   (A) a decrease of exactly $10 million in gross domestic product
   (B) a decrease of more than $10 million in gross domestic product
   (C) an increase of $10 million in taxes to offset the decrease in investment
   (D) an increase of $10 million in aggregate supply to offset the decrease in investment
   (E) an increase in the cost of loans for investment purposes

8. The circular-flow model indicates that final goods are produced by

   (A) firms and sold in the factor markets
   (B) firms and sold in the product markets
   (C) firms and sold in the resource markets
   (D) households and sold in the factor markets
   (E) households and sold in the product markets

9. If the interest rate on short-term government bonds declined as a result of open market operations by a central bank, the central bank must have

   (A) purchased government bonds
   (B) sold government bonds to commercial banks
   (C) decreased the amount of currency in circulation
   (D) increased the supply of bonds
   (E) increased the discount rate on loans to commercial banks

10. Which of the following is most likely to promote long-run economic growth?

    (A) An increase in government transfer payments
    (B) An increase in income taxes for middle-class households
    (C) An increase in tax credits for business spending on research and development
    (D) An increase in unemployment compensation
    (E) An increase in financial capital outflow

11. To reduce inflation, the central bank would be most likely to

    (A) decrease the reserve requirement
    (B) decrease the income tax rates
    (C) increase the supply of money
    (D) buy government securities
    (E) sell government securities

12. The implementation of an expansionary monetary policy by the Canadian central bank will result in which of the following changes in the short run?

	Interest Rate	Canadian Dollar
(A)	Increase	Appreciate
(B)	Increase	Depreciate
(C)	Decrease	Depreciate
(D)	No change	Depreciate
(E)	Decrease	Appreciate

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13. The table below shows a country's macroeconomic data in 2013.

Consumption spending	$175 billion
Individual income taxes	$32 billion
Private investment spending	$30 billion
Corporate taxes	$25 billion
Exports	$75 billion
Government purchases	$40 billion
Imports	$100 billion

The country's gross domestic product is

(A) $220 billion
(B) $282 billion
(C) $304 billion
(D) $309 billion
(E) $347 billion

14. Which of the following is a monetary policy that can be used to counteract a recession?

(A) Buying bonds in the open market
(B) Increasing the discount rate
(C) Increasing the required reserve ratio
(D) Lowering tax rates
(E) Increasing government spending

15. If the required reserve ratio is 0.2, a $1 billion increase in bank reserves can lead to an increase in M1 of at most

(A) $6 billion
(B) $5 billion
(C) $1 billion
(D) $0.8 billion
(E) $0.2 billion

Assets			Liabilities	
Reserves		$100,000	Checkable Deposits	$400,000
Required	$80,000			
Excess	$20,000			
Loans		$300,000		
Total		$400,000	Total	$400,000

16. The table above shows the current entries in the T-account of XYZ Bank. Kim purchases a bond issued by the Federal Reserve Bank for $50,000 and pays for the bond by drawing on her company's account at XYZ Bank. What is the effect of Kim's purchase of the bond on the required and excess reserves of XYZ Bank and the total money supply?

	Required	Excess	Money Supply
(A)	Increase	Decrease	Decrease
(B)	Decrease	Decrease	Decrease
(C)	No Change	Decrease	No Change
(D)	Increase	No change	Increase
(E)	Decrease	Increase	Increase

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17. When an economy producing two goods is operating efficiently and at full employment, increasing the production of one good will result in

(A) an inward shift of the production possibilities curve
(B) an outward shift of the production possibilities curve
(C) a decrease in the amount of the other good that can be produced
(D) an increase in the costs of both goods
(E) an increase in the amount of resources available

18. Which of the following describes a major difference between stocks and bonds?

(A) Stocks represent ownership in a corporation, and bonds represent a loan to a corporation.
(B) Bonds represent ownership in a corporation, and stocks represent a loan to a corporation.
(C) Stocks are counted in gross domestic product, and bonds are not counted.
(D) Bonds are counted in gross domestic product, and stocks are not counted.
(E) Bonds pay dividends, and stocks earn interest.

19. When Country X has a trade deficit, which of the following is necessarily true?

(A) Country X has a higher savings rate than most other countries.
(B) The value of Country X's imports exceeds the value of its exports.
(C) Country X has a lower gross domestic product than most other countries.
(D) There is a net financial capital outflow from Country X.
(E) Country X has been increasing tariffs on key goods and services, such as automobiles and steel.

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20. Brazil and Peru produce both coffee and wheat using labor as the only input. The table below shows the labor hours required to produce a unit of coffee and a unit of wheat in each country.

	Labor Hours per Unit of Coffee	Labor Hours per Unit of Wheat
Brazil	12	4
Peru	6	4

Based on the information in the table above, which of the following is true?

(A) Peru has a comparative advantage in producing wheat.
(B) Peru has an absolute advantage in producing wheat.
(C) Brazil has an absolute advantage in producing wheat.
(D) Peru has a comparative advantage in producing coffee.
(E) Brazil has a comparative advantage in producing coffee.

21. Gross private domestic investment includes which of the following?

(A) Changes in business inventories
(B) National defense spending
(C) New durable goods purchased by households
(D) Transfer payments
(E) Depreciation of government goods

22. Which of the following will lead to an increase in United States net exports?

(A) An increase in United States real gross domestic product
(B) Appreciation of the United States dollar on the foreign exchange market
(C) Depreciation of the United States dollar on the foreign exchange market
(D) An increase in government expenditures in the United States
(E) A decrease in income tax rates in the United States

23. An increase in which of the following is most likely to increase employment and promote long-run economic growth?

(A) Government spending on education
(B) Transfer payments
(C) Reserve requirements
(D) Income tax rates
(E) Unemployment compensation

24. Which of the following is implied by a long-run Phillips curve?

(A) Wages are sticky.
(B) There is no trade-off between unemployment and inflation.
(C) The long-run aggregate supply curve is upward-sloping.
(D) Expected inflation exceeds actual inflation.
(E) The unemployment rate falls with higher inflation.

25. Technological progress promotes long-run economic growth primarily by

(A) increasing the supply of financial capital
(B) increasing labor productivity
(C) decreasing national savings
(D) decreasing budget deficit
(E) decreasing nominal wages

26. Which of the following changes would most likely cause an increase in interest rates in the short run?

(A) A decrease in reserve requirements
(B) An increase in trade deficits
(C) An open market purchase of government bonds by the Federal Reserve
(D) An increase in government spending financed by borrowing
(E) An increase in the price of bonds

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27. The short-run Phillips curve shows

(A) a trade-off between the natural rate of unemployment and the rate of inflation
(B) a trade-off between the unemployment rate and rate of inflation
(C) a relationship between increases in the money supply and the rate of inflation
(D) that at the natural rate of unemployment there is no trade-off between the rate of inflation and the unemployment rate
(E) how expectations change as the rate of inflation increases and the unemployment rate decreases

28. In an economy the marginal propensity to consume is 0.90, and gross domestic product (GDP) is $100 billion. If gross private domestic investment declines by $2 billion, then GDP will

(A) decrease by a maximum of $1.8 billion
(B) decrease by a maximum of $2 billion
(C) decrease by a maximum of $20 billion
(D) increase by a maximum of $1.8 billion
(E) increase by a maximum of $20 billion

29. Melanie quits her job to look for a better one that has opportunity for advancement. Melanie will be classified in which category of unemployment?

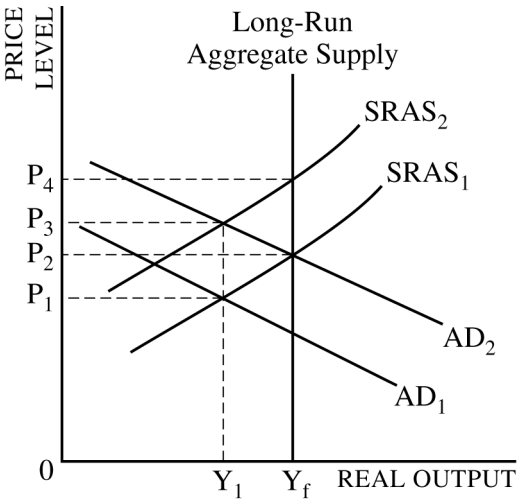
(A) Frictional
(B) Hidden
(C) Seasonal
(D) Structural
(E) Cyclical

30. An increase in money demand will cause which of the following?

(A) A decrease in the nominal interest rate
(B) A decrease in bond prices
(C) A decrease in the money supply
(D) An increase in the price level
(E) An increase in the natural rate of unemployment

31. Which of the following is a best example of an investment in human capital?

(A) Decreasing the wage rate
(B) Training workers
(C) Hiring new workers
(D) Buying new equipment
(E) Updating technology



32. The graph above shows aggregate demand (AD), short-run aggregate supply (SRAS), and long-run aggregate supply curves for an economy. Based on the graph, cost-push inflation is caused by a movement from

(A) $SRAS_1$ to $SRAS_2$
(B) $SRAS_2$ to $SRAS_1$
(C) AD_1 to AD_2
(D) AD_2 to AD_1
(E) Y_1 to Y_f

33. Assume that the reserve requirement is 10 percent. Marwa deposits $1 million in cash into her checking account at First Bank. The deposit will initially increase excess reserves at First Bank by

(A) $100,000
(B) $900,000
(C) $1 million
(D) $9 million
(E) $10 million

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34. Assume a country's government has a balanced budget. If the economy goes into a recession, what will happen to the government's budget in the short run?

(A) It will be in surplus, because the government will increase its spending.
(B) It will be in surplus, because there will be an automatic decrease in unemployment payments.
(C) It will be in deficit, because the government will raise the tax rates.
(D) It will be in deficit, because the price level will decrease.
(E) It will be in deficit, because there will be an automatic decrease in tax receipts.

35. Following a decrease in aggregate demand, an increase in unemployment will result if

(A) prices increase and real wages decrease
(B) the aggregate supply curve is vertical
(C) prices and wages quickly adjust to equilibrium levels
(D) short-run aggregate supply also increases
(E) prices and nominal wages are slow to adjust in the short run

36. In the long run, a fully anticipated increase in the inflation rate will

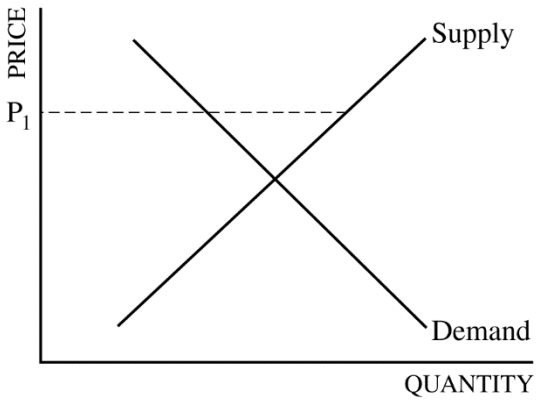
(A) increase real national output
(B) increase the nominal interest rate
(C) decrease real national output
(D) decrease the real interest rate
(E) shift the long-run Phillips curve to the right

37. The exchange rate is 1.2 euros per United States dollar. If a restaurant meal costs 30 euros in Paris, France, what is its dollar cost to a United States tourist?

(A) $2.50
(B) $3.60
(C) $25
(D) $30
(E) $36

38. If the central bank buys government bonds from individuals on the open market and banks do not loan out any excess reserves created by the open market purchase, which of the following will happen?

(A) The money supply will increase.
(B) The money supply will remain unchanged.
(C) Loans to the private sector will increase.
(D) Demand deposits will decrease.
(E) The level of actual reserves will decrease.



39. The graph above shows the demand for and supply of a good. If the market price is P_1, then

(A) there is a shortage, and the price will rise
(B) there is a shortage, and the price will fall
(C) there is a surplus, and the price will rise
(D) there is a surplus, and the price will fall
(E) demand will decrease and supply will increase

40. Assume that the government finances its spending by borrowing from the public. If the government increases deficit spending, the price of previously issued bonds and the real interest rate will change in which of the following ways?

	Price of Bonds	Real Interest Rate
(A)	Decrease	Decrease
(B)	Decrease	Increase
(C)	Increase	Decrease
(D)	Increase	No change
(E)	Increase	Increase

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41. Assume an economy is in a long-run equilibrium. Following a decrease in aggregate demand, which of the following is true in the short run?

(A) The unemployment rate is equal to the natural rate of unemployment, and the rate of inflation is rising.
(B) The unemployment rate is greater than the natural rate of unemployment, and the rate of inflation is rising.
(C) The unemployment rate is greater than the natural rate of unemployment, and the rate of inflation is declining.
(D) The unemployment rate is lower than the natural rate of unemployment, and the rate of inflation is declining.
(E) The unemployment rate is lower than the natural rate of unemployment, and the unemployment rate is rising.

42. An increase in government deficit spending can crowd out private investment by

(A) decreasing the supply of money
(B) increasing the supply of money
(C) decreasing the real interest rate
(D) increasing the real interest rate
(E) decreasing the price level

43. An increase in consumer confidence will result in which of the following in the short run?

(A) A rightward shift of the long-run aggregate supply curve
(B) A rightward shift of the short-run aggregate supply curve
(C) A leftward shift of the short-run aggregate supply curve
(D) A rightward shift of the aggregate demand curve
(E) A leftward shift of the aggregate demand curve

44. Given a constant velocity of money, in the short run a 5 percent increase in money supply will translate to a 5 percent increase in

(A) government budget deficit
(B) real gross domestic product
(C) nominal gross domestic product
(D) real interest rates
(E) nominal interest rates

45. Assume a country has an open economy and a flexible exchange rate system. An increase in the country's government budget deficit would most likely cause

(A) a decrease in real interest rate and a decrease in net exports
(B) a decrease in real interest rate and a decrease in domestic investment in plant and equipment
(C) no change in real interest rate and a decrease in net exports
(D) an increase in real interest rate and an increase in domestic investment in plant and equipment
(E) an increase in real interest rate and a decrease in net exports

46. Which of the following mixes of fiscal and monetary policy would reduce inflation?

	Fiscal Policy	Monetary Policy
(A)	Decrease spending	Buy bonds
(B)	Decrease taxes	Buy bonds
(C)	Increase taxes	Sell bonds
(D)	Increase spending	Buy bonds
(E)	Increase spending	Sell bonds

47. The natural rate of unemployment is the unemployment rate when

(A) all workers seeking employment have taken jobs
(B) all the unemployed are only structurally unemployed
(C) there is no frictional unemployment
(D) there is no cyclical unemployment
(E) there are no new unemployed individuals

48. Which of the following accurately describes the federal funds rate?

(A) The interest rate that banks charge state governments
(B) The interest rate that banks charge other banks for overnight loans
(C) The interest rate that banks pay on long-term savings
(D) The interest rate on personal loans
(E) The interest rate on government bonds

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49. In 2007, the nominal gross domestic product (GDP) was $50 billion and the GDP deflator was 200. Thus real GDP was

(A) $150 billion
(B) $100 billion
(C) $50 billion
(D) $25 billion
(E) $4 billion

50. Supply-side economists are most likely to favor which of the following short-run policies?

(A) Increasing government spending on social welfare
(B) Increasing government spending to help promote the country's business abroad
(C) Cutting marginal tax rates to promote savings, investment, and work
(D) Financing government spending on infrastructure by increasing sales tax rather than increasing income tax
(E) Increasing corporate profit tax rates

51. Nations A and B produce only chairs and bicycles. If each laborer in Nation A can produce twice as many chairs as each laborer in Nation B, then which of the following is necessarily true?

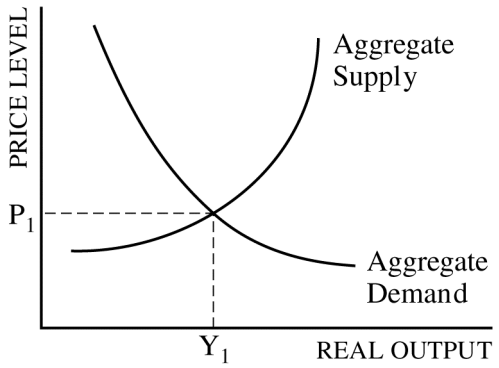
(A) Nation A has a comparative advantage in chairs.
(B) Nation A has a comparative advantage in bicycles.
(C) Nation A has an absolute advantage in chairs.
(D) Nation B has an absolute advantage in bicycles.
(E) Nation A should specialize in producing chairs.

52. If the government implements an expansionary fiscal policy, what action can the central bank take to maintain a stable interest rate?

(A) Increase the required reserve ratio
(B) Increase personal income tax rates
(C) Decrease personal income tax rates
(D) Sell government bonds
(E) Buy government bonds

53. Which of the following is true about the expected real interest rate?

(A) It is equal to the nominal interest rate plus the expected inflation rate.
(B) It is equal to the ratio of the nominal interest rate to the inflation rate.
(C) It increases as the price level increases.
(D) It is always positive.
(E) It is negative if the expected inflation rate exceeds the nominal interest rate.



54. The aggregate supply and aggregate demand graph above shows the current macroeconomic equilibrium of an economy. How will the price level and real output change if there is a sharp increase in productivity and a simultaneous increase in government purchases?

	Price Level	Real Output
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Indeterminate	Increase
(D)	Indeterminate	Decrease
(E)	Indeterminate	Indeterminate

55. If country X imposes a tariff on its imports, how will the supply of its currency and its exchange rate be affected in foreign exchange markets?

	Supply	Currency
(A)	Increase	Depreciate
(B)	Increase	Appreciate
(C)	No change	Appreciate
(D)	Decrease	Depreciate
(E)	Decrease	Appreciate

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56. In the short run, cost-push inflation can be caused by

(A) printing too much money
(B) increased government spending
(C) negative supply shocks
(D) decreased tariffs
(E) decreased taxes

57. Which of the following necessarily occurs during an economic recession?

(A) Cost-push inflation decreases.
(B) Real gross domestic product decreases.
(C) Cyclical unemployment decreases.
(D) Demand-pull inflation increases.
(E) Nominal wages increase.

58. Which of the following will cause an increase in real output in the short run?

(A) A decrease in productivity
(B) A decrease in wages
(C) A decrease in government expenditure
(D) An increase in reserve requirements
(E) An increase in the discount rate

59. A lender will realize unexpected benefit when the

(A) actual inflation rate is higher than the anticipated inflation rate
(B) actual inflation rate is lower than the anticipated inflation rate
(C) rate of interest is greater than the actual rate of inflation
(D) rate of interest is less than the actual rate of inflation
(E) rate of interest equals the actual rate of inflation

60. An increase in the money supply will affect the price level and real gross domestic product (GDP) in which of the following ways in the long run?

	Price Level	Real GDP
(A)	Decrease	No change
(B)	Increase	Decrease
(C)	Increase	No change
(D)	Decrease	Increase
(E)	No change	No change

END OF SECTION I

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION.

DO NOT GO ON TO SECTION II UNTIL YOU ARE TOLD TO DO SO.

MAKE SURE YOU HAVE DONE THE FOLLOWING.

- **PLACED YOUR AP NUMBER LABEL ON YOUR ANSWER SHEET**
- **WRITTEN AND GRIDDED YOUR AP NUMBER CORRECTLY ON YOUR ANSWER SHEET**
- **TAKEN THE AP EXAM LABEL FROM THE FRONT OF THIS BOOKLET AND PLACED IT ON YOUR ANSWER SHEET**

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SECTION II: Free Response

2016

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

At a Glance

Total Time
1 hour
Number of Questions
3
Percent of Total Score
33.33%
Writing Instrument
Pen with black or dark blue ink
Electronic Device
None allowed

Reading Period

Time
10 minutes. Use this time to read the questions and plan your answers. You may begin writing your responses before the reading period is over.

Writing Period

Time
50 minutes

Question 1
Suggested Time
25 minutes
Percent of Section II Score
50%

Question 2
Suggested Time
12.5 minutes
Percent of Section II Score
25%

Question 3
Suggested Time
12.5 minutes
Percent of Section II Score
25%

IMPORTANT Identification Information

PLEASE PRINT WITH PEN:

1. First two letters of your last name ☐☐
   First letter of your first name ☐
2. Date of birth
   ☐☐ Month ☐☐ Day ☐☐☐☐ Year
3. Six-digit school code
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   No, I do not grant the College Board these rights. ☐

Instructions

The questions for Section II are printed in this booklet. You may use page 3 and the pages the questions are printed on to organize your answers and for scratch work, but you must write your answers on the lined pages provided for each question.

The proctor will announce the beginning and end of the reading period. You are advised to spend the 10-minute period reading all the questions and planning your answers. You may begin writing your responses before the reading period is over.

Write clearly and legibly. Do not skip lines. Cross out any errors you make; crossed-out work will not be scored.

Manage your time carefully. You may proceed freely from one question to the next. You may review your responses if you finish before the end of the exam is announced.

Form I
Form Code 4MBP4-S

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MACROECONOMICS

Section II

Total Time—60 minutes

Reading Period—10 minutes

Writing Period—50 minutes

Directions: You are advised to spend the first 10 minutes reading all of the questions and planning your answers. You will then have 50 minutes to answer all three of the following questions. You may begin writing your responses before the reading period is over. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. Use a pen with black or dark blue ink.

Question 1 begins on page 4.

Question 2 begins on page 10.

Question 3 begins on page 14.

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

1. The economy of Zarland is operating below the full-employment level of output with a balanced budget.

   (a) Draw a correctly labeled graph of short-run aggregate supply, long-run aggregate supply, and aggregate demand, and show each of the following.

      (i) The country's current equilibrium output and price level, labeled Y_1 and PL_1, respectively

      (ii) The full-employment output, labeled Y_f

   (b) If Zarland increases government expenditures and taxes by equal amounts, can aggregate demand increase? Explain.

   (c) If Zarland decides to pursue an expansionary monetary policy, what open-market operation should the central bank undertake?

   (d) Using a correctly labeled graph of the money market, show the short-run effect of the open-market operation you identified in part (c) on the interest rate.

   (e) As a result of the interest rate change associated with the expansionary monetary policy, will the supply of Zarland's currency in the foreign exchange market increase, decrease, or remain the same in the short run? Explain.

   (f) Based on your answer in part (e), will the value of Zarland's currency in the foreign exchange market increase, decrease, or remain the same in the short run?

   (g) Following the change in the value of Zarland's currency that you identified in part (f), will Zarland's exports increase, decrease, or remain the same in the short run? Explain.

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ANSWER PAGE FOR QUESTION 1

GO ON TO THE NEXT PAGE.

Question 1 is reprinted for your convenience.

1. The economy of Zarland is operating below the full-employment level of output with a balanced budget.

   (a) Draw a correctly labeled graph of short-run aggregate supply, long-run aggregate supply, and aggregate demand, and show each of the following.

      (i) The country's current equilibrium output and price level, labeled Y_1 and PL_1, respectively

      (ii) The full-employment output, labeled Y_f

   (b) If Zarland increases government expenditures and taxes by equal amounts, can aggregate demand increase? Explain.

   (c) If Zarland decides to pursue an expansionary monetary policy, what open-market operation should the central bank undertake?

   (d) Using a correctly labeled graph of the money market, show the short-run effect of the open-market operation you identified in part (c) on the interest rate.

   (e) As a result of the interest rate change associated with the expansionary monetary policy, will the supply of Zarland's currency in the foreign exchange market increase, decrease, or remain the same in the short run? Explain.

   (f) Based on your answer in part (e), will the value of Zarland's currency in the foreign exchange market increase, decrease, or remain the same in the short run?

   (g) Following the change in the value of Zarland's currency that you identified in part (f), will Zarland's exports increase, decrease, or remain the same in the short run? Explain.

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ADDITIONAL PAGE FOR ANSWERING QUESTION 1

GO ON TO THE NEXT PAGE.

ADDITIONAL PAGE FOR ANSWERING QUESTION 1

GO ON TO THE NEXT PAGE.

ADDITIONAL PAGE FOR ANSWERING QUESTION 1

GO ON TO THE NEXT PAGE.

2. Assume that the current unemployment rate in Country A is lower than the natural rate of unemployment.

   (a) Draw a single correctly labeled graph with both the long-run Phillips curve and the short-run Phillips curve. Label the current short-run equilibrium point Z.

   (b) Identify a specific fiscal policy action that would bring the economy to full employment.

   (c) Draw a correctly labeled graph of the loanable funds market, and show the effect of the fiscal policy from part (b) on the real interest rate in the short run.

   (d) Now assume instead that there is no fiscal policy action. Will the short-run Phillips curve shift to the right, shift to the left, or remain the same over time? Explain.

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ANSWER PAGE FOR QUESTION 2

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ADDITIONAL PAGE FOR ANSWERING QUESTION 2

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ADDITIONAL PAGE FOR ANSWERING QUESTION 2

GO ON TO THE NEXT PAGE.

3. The Bank of Uchenna has the following balance sheet.

Assets		Liabilities and Equity	
Reserves	$30,000	Demand deposits	$100,000
Loans	$70,000		
Property	$2,000	Equity (net worth)	$2,000

Assume that the reserve requirement ratio is 20 percent.

(a) Calculate the dollar value of the reserves that the Bank of Uchenna is required to hold.

(b) Given the current reserves, calculate the maximum value of additional loans that the Bank of Uchenna can make.

(c) Assume that Elike raises $5,000 in cash from a yard sale and deposits the cash in his checking account at the Bank of Uchenna. By how much does the money supply immediately change as a result of Elike's deposit?

(d) Calculate the maximum change in demand deposits in the banking system as a whole resulting from Elike's deposit.

(e) If the Bank of Uchenna is not meeting its reserve requirement, what action can it take to meet the reserve requirement without calling in loans or selling property?

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ANSWER PAGE FOR QUESTION 3

GO ON TO THE NEXT PAGE.

ADDITIONAL PAGE FOR ANSWERING QUESTION 3

ADDITIONAL PAGE FOR ANSWERING QUESTION 3

STOP

END OF EXAM

THE FOLLOWING INSTRUCTIONS APPLY TO THE COVERS OF THE SECTION II BOOKLET.

- **MAKE SURE YOU HAVE COMPLETED THE IDENTIFICATION INFORMATION AS REQUESTED ON THE FRONT AND BACK COVERS OF THE SECTION II BOOKLET.**
- **CHECK TO SEE THAT YOUR AP NUMBER LABEL APPEARS IN THE BOX ON THE COVER.**
- **MAKE SURE YOU HAVE USED THE SAME SET OF AP NUMBER LABELS ON ALL AP EXAMS YOU HAVE TAKEN THIS YEAR.**

AP Macroeconomics

2016

APPENDIX - ANSWERS

Matching multiple-choice answers and free-response scoring follow.

Answer Key for AP Macroeconomics Practice Exam, Section I

Question 1: C
Question 2: E
Question 3: B
Question 4: E
Question 5: E
Question 6: A
Question 7: B
Question 8: B
Question 9: A
Question 10: C
Question 11: E
Question 12: C
Question 13: A
Question 14: A
Question 15: B
Question 16: B
Question 17: C
Question 18: A
Question 19: B
Question 20: D
Question 21: A
Question 22: C
Question 23: A
Question 24: B
Question 25: B
Question 26: D
Question 27: B
Question 28: C
Question 29: A
Question 30: B
Question 31: B
Question 32: A
Question 33: B
Question 34: E
Question 35: E
Question 36: B
Question 37: C
Question 38: A
Question 39: D
Question 40: B
Question 41: C
Question 42: D
Question 43: D
Question 44: C
Question 45: E
Question 46: C
Question 47: D
Question 48: B
Question 49: D
Question 50: C
Question 51: C
Question 52: E
Question 53: E
Question 54: C
Question 55: E
Question 56: C
Question 57: B
Question 58: B
Question 59: B
Question 60: C

Free-Response Scoring Guidelines

The following contains the scoring guidelines
for the free-response questions in this exam.

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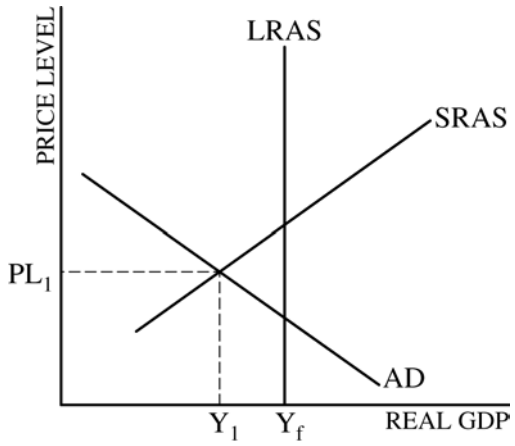
Question 1

9 points: 2+1+1+2+1+1+1



(a) 2 points:

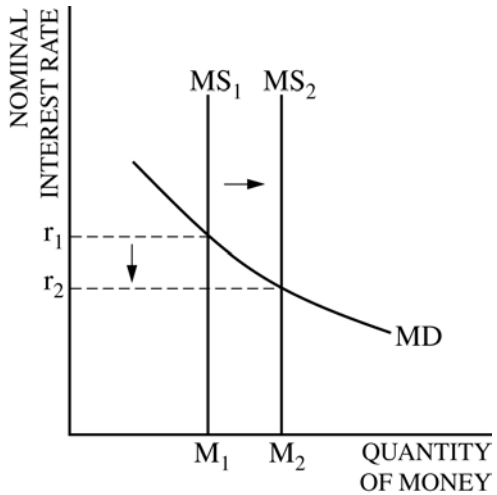
- One point is earned for drawing a correctly labeled graph showing AD, SRAS, Y_1 and PL_1.
- One point is earned for drawing a vertical LRAS at Y_f to the right of Y_1.

(b) 1 point:

- One point is earned for stating that aggregate demand can increase, and for explaining that government spending multiplier (1/mps) is greater than the tax multiplier (mpc/mps), therefore an equal increase in government expenditures and taxes will increase real GDP by the amount of the initial increase in government expenditures.

(c) 1 point:

- One point is earned for stating that the central bank should buy bonds.



(d) 2 points:

- One point is earned for drawing a correctly labeled money market graph.
- One point is earned for shifting the money supply curve to the right and showing a decrease in the nominal interest rate.

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Question 1 (continued)

(e) 1 point:

- One point is earned for stating that the supply of Zarland's currency will increase and for explaining that financial investors seeking higher returns for their financial investments will sell Zarland's financial assets (capital outflow) to buy foreign assets.

(f) 1 point

- One point is earned for stating that the value of Zarland's currency will decrease (or Zarland's currency will depreciate).

(g) 1 point

- One point is earned for stating that Zarland's exports will increase and for explaining that Zarland's goods will become relatively cheaper than foreign goods.

  OR/ because the depreciation in Zarland's currency means appreciation in foreign currencies which increases the demand for Zarland's goods.

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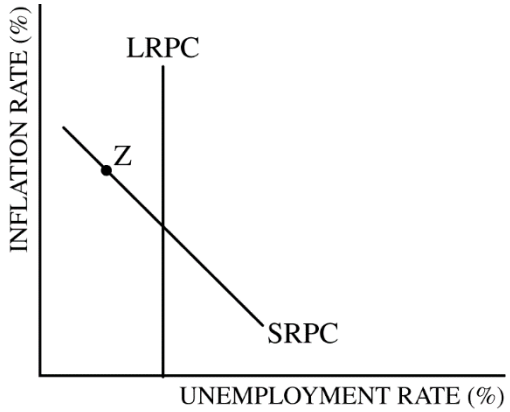
Question 2

6 points: 2+1+2+1

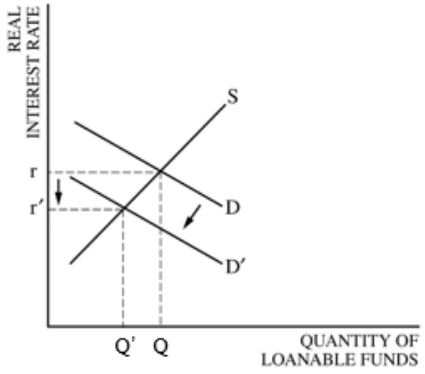


(a) 2 points:

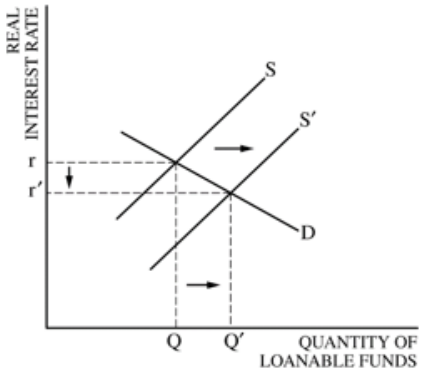
- One point is earned for drawing a correctly labeled graph showing a vertical LRPC and a downward sloping SRPC.
- One point is earned for showing point Z on the SRPC to the left of LRPC.

(b) 1 point:

- One point is earned for stating that a contractionary fiscal policy such as an increase in taxes or a decrease in government expenditure will return the economy to full employment.



OR



(b) 2 points:

- One point is earned for drawing a correctly labeled graph of the loanable funds market.
- One point is earned for shifting the supply of loanable funds curve to the right or the demand for loanable funds to the left and showing a decrease in the real interest rate.

(d) 1 point:

- One point is earned for stating that SRPC will shift to the right (upwards) and for explaining that inflationary expectations increase, or input prices increase, or wages increase.

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Question 3

5 points: 1+1+1+1+1

(a) 1 point:
- One point is earned for calculating the required reserves: $20,000.

(b) 1 point:
- One point is earned for calculating the maximum amount of additional loans that Bank of Uchenna can make as $10,000 (= $30,000 - $20,000).

(c) 1 point:
- One point is earned for stating that there will be no change in the money supply.

(d) 1 point:
- One point is earned for stating that the maximum change in demand deposits in the banking system is $25,000 (= $5,000 x 5).

(e) 1 point:
- One point is earned for stating that Bank of Uchenna can borrow from other banks to meet its reserve requirements or borrow from the central bank.

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