AP® Macroeconomics Exam

SECTION I: Multiple Choice

2017

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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 lime ellectively, 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 4NBP4-S

35

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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.

1. A production possibilities curve that is concave to the origin (bowed out) implies that as more of a good is produced, the opportunity cost

   (A) remains constant
   (B) decreases
   (C) decreases at first and then increases
   (D) increases
   (E) increases at first and then decreases

2. In the long run, government suhsidies that promote the development of technology with widespread business applications will have which of the following effects?

   (A) A negative supply shock and lower price level
   (B) A negative supply shock and lower economic growth rate
   (C) A positive supply shock and lower price level
   (D) A positive supply shock and lower economic growth rate
   (E) A lower aggregate demand and lower price level

3. Olivia volunteers full time at an animal shelter and will not accept any offers for a paid job for the next six months. Olivia is

   (A) cyclically unemployed
   (B) not in the labor force
   (C) employed
   (D) structurally unemployed
   (E) a scasonal worker

4. With an expansionary fiscal policy, what will most likely happen to the real gross domestic product (GDP) and the nominal interest rate in the short run?

	Real GDP	Nominal Interest Rate
(A)	Increase	Decrease
(B)	Increase	Increase
(C)	No change	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease

5. Economic growth is best measured by a sustained increase in which of the following?

   (A) Per capita real gross domestic product
   (B) Government budget deficits
   (C) Unemployment in unskilled labor markets
   (D) Production of public goods
   (E) Nominal gross domestic product

6. The long-run Phillips curve indicates that there are no trade-offs between

   (A) aggregate demand and aggregate supply
   (B) imports and exports
   (C) consumption and investment
   (D) consumption and saving
   (E) inflation and unemployment

7. Assume that a country's government increases borrowing. What will most likely happen to the prices of previously issued bonds and the price level in the short run?

	Bond Prices	Price Level
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Increase	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease

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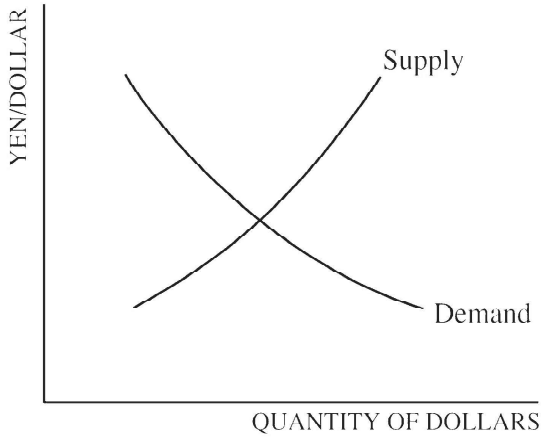

8. The graph above shows the foreign exchange market for United States dollars in terms of Japanese yen. Assume that there is an increase in United States consumers' preference for Japanese automobiles. Which of the following changes will most likely take place in the market for dollars?

(A) It will take more yen to purchase the same amount of dollars.
(B) The demand for dollars will increase.
(C) The supply of dollars will increase.
(D) Both the demand for and the supply of dollars will decrease.
(E) There will be no change in the foreign exchange market.

Year	Nominal GDP	GDP Deflator
1980	$14,000	70
1990	$18,000	100
2000	$22,000	220
2010	$50,000	200
2015	$60,000	300

9. According to the data above, in which year was real gross domestic product (GDP) the largest?

(A) 1980
(B) 1990
(C) 2000
(D) 2010
(E) 2015

10. Which of the following will happen if a country's government reduces business taxes?

(A) The short-run Phillips curve will shift to the right.
(B) The short-run aggregate supply curve will shift to the right.
(C) The long-run aggregate supply curve will shift to the left.
(D) The aggregate demand curve will shift to the left.
(E) The demand curve for loanable funds will shift to the left.

11. In the coffee market, which of the following changes will increase the price and decrease the quantity of coffee?

	Supply	Demand
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Decrease	Increase
(D)	No change	Increase
(E)	Decrease	No change

12. An increase in inventories will increase which component of gross domestic product?

(A) Personal consumption expenditures
(B) Investment expenditures
(C) Government purchases
(D) Exports
(E) Imports

13. If real output is $9,000, and the price level is 2, and the velocity of money is 3, then the money supply is

(A) $3,000
(B) $4,500
(C) $6,000
(D) $18,000
(E) $27,000

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14. Which of the following combinations of fiscal and monetary policy will reduce the price level?

	Fiscal Policy	Monetary Policy
(A)	Increasing government spending	Buying government bonds
(B)	Increasing government spending	Selling government bonds
(C)	Decreasing government spending	Buying government bonds
(D)	Decreasing government spending	Selling government bonds
(E)	Decreasing taxes	Decreasing the discount rate

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15. All of the following may result in increases in real gross domestic product in the long run EXCEPT

(A) technical progress
(B) investment in human capital
(C) discovery of new natural resources
(D) decrease in corporate taxes
(E) decrease in factor productivity

16. If government spending increases and at the same time a country's central bank sells bonds in the open market, the interest rate and private investment in plant and equipment (P&E) will most likely change in which of the following ways?

	Interest Rate	Private Investment in P&E
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Increase	No change
(D)	No change	Decrease
(E)	Decrease	Decrease

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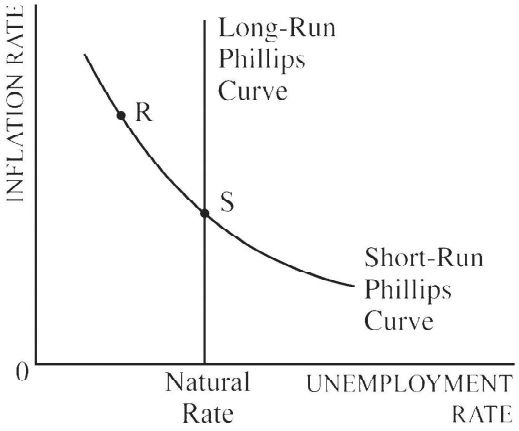

17. Which of the following would cause a movement from point S to point R on the short-run Phillips curve above?

(A) An unanticipated increase in government spending
(B) An unanticipated adverse supply shock
(C) A decrease in net investment
(D) An increase in real interest rates
(E) An increase in the labor-force participation rate

18. If policy makers use fiscal policy to reduce inflation, which of the following will most likely happen in the short run?

(A) The unemployment rate will decrease.
(B) The unemployment rate will increase.
(C) The real interest rate will increase.
(D) The nominal interest rate will increase.
(E) The economy will remain at the natural rate of unemployment.

19. Crowding out occurs when investment spending by the private sector decreases as a result of

(A) decreasing interest rates caused by an increase in the supply of government bonds
(B) decreasing interest rates caused by a decrease in the demand for loanable funds
(C) decreasing interest rates caused by an increase in government borrowing
(D) increasing interest rates caused by an increase in government borrowing
(E) increasing interest rates caused by a decrease in government borrowing

20. Assume that a nation's real gross domestic product (GDP) grows at a higher rate than its population over a given period of time. It can be concluded that

(A) the population will grow at a faster rate in the future
(B) the price level has decreased
(C) real GDP per capita has increased
(D) real GDP will rise at a slower rate in the future
(E) real GDP will rise at a faster rate in the future

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21. Assume that banks hold no excess reserves. A decrease in the required reserve ratio will cause total reserves in banks, the money multiplier, and the money supply to change in which of the following ways?

	Total Reserves	Money Multiplier	Money Supply
(A)	Increase	Increase	Increase
(B)	Increase	No change	Increase
(C)	No change	Increase	Decrease
(D)	Decrease	Decrease	Decrease
(E)	No change	Increase	Increase

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22. If the consumer price index increases from 200 to 240 in a one-year period, then the inflation rate is

(A) 16.67 percent
(B) 20 percent
(C) 25 percent
(D) 40 percent
(E) 140 percent

23. In the long run, a fully anticipated expansion of the money supply will

(A) increase both the price level and real gross domestic product
(B) increase the price level and decrease the real wage
(C) increase both the price level and the real wage
(D) increase both the nominal gross domestic product and the price level
(E) increase both the nominal and real gross domestic product

24. Which of the following policy actions will promote long-run economic growth?

(A) Decreasing the investment tax credit
(B) Decreasing the money supply
(C) Increasing unemployment compensation
(D) Increasing investment in human capital
(E) Increasing tax rates on savings income

25. Which of the following transactions would increase the current account surplus in Japan's balance of payments accounts?

(A) A Japan-based company sells roasted coffee to Canada.
(B) Mari, a Japanese investor, buys stocks in a Japanese company.
(C) Bob, a Canadian, buys stocks in a Japanese company.
(D) A Japan-based company buys a piece of equipment from Germany.
(E) Artois, a French citizen, works at a Japanese company in Paris.

26. Suppose countries Alphania and Betania produce electronics and apparel using identical resources. Which of the following is true if Alphania exports electronics to and imports apparel from Betania within a free-trade system ?

(A) The opportunity cost of producing electronics is higher in Alphania than in Betania.
(B) Betania has a comparative advantage in producing apparel, and Alphania has a comparative advantage in producing electronics.
(C) Alphania must be specializing in apparel, while Betania is specializing in electronics.
(D) Workers in Alphania can produce more apparel per hour than workers in Betania.
(E) Consumers in Betania buy more electronics than consumers in Alphania.

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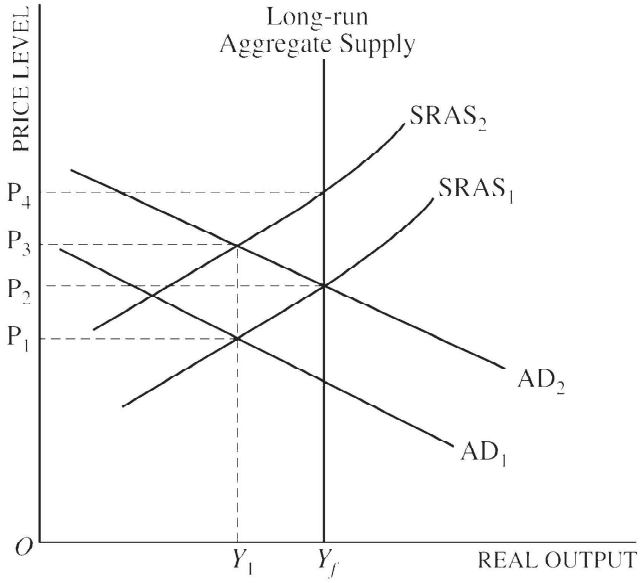

27. Based on the graph above, demand-pull inflation is caused by a movement from

(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_f to Y_1

28. A decrease in taxes will necessarily result in an increase in which of the following?

(A) Nominal gross domestic product
(B) Unemployment
(C) Exports
(D) Marginal propensity to save
(E) Money supply

29. Which of the following will cause an increase in the equilibrium real interest rate?

(A) An increase in investment demand
(B) An increase in national saving
(C) An increase in the government budget surplus
(D) A decrease in the government budget deficit
(E) The purchase of government bonds by the central bank

30. Which of the following will most likely promote long-run economic growth?

(A) Increasing taxes on interest earned from savings
(B) Increasing consumption spending on food and entertainment
(C) Increasing funding for research and development
(D) Decreasing funding for law enforcement and judicial systems
(E) Rapidly harvesting timber and mineral resources

31. In the foreign exchange market, the exchange rate is defined as

(A) the price of one currency in terms of another currency
(B) the price of goods around the world
(C) the price of a good in ters of another good
(D) the discount that companics take when goods are returned
(E) the quantity of a good to he traded for a unit of another good

32. A nation's unemployment rate is the ratio of the number of unemployed seeking employment to the nation's

(A) labor force
(B) potential gross domestic product
(C) number of employed
(D) working-age population
(E) total population

33. An open-market operation by a country's central bank to reduce the unemployment rate would be to

(A) sell bonds to decrease the interest rate and to increase aggregate demand
(B) sell bonds to increase the interest rate and to decrease aggregate demand
(C) sell bonds to increase the interest rate and to increase investment
(D) buy bonds to decrease the interest rate and to decrease aggregate demand
(E) buy bonds to decrease the interest rate and to increase aggregate demand

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34. Assume that the marginal propensity to consume is 0.75, net exports decline by $10 billion, and government spending increases by $20 billion. Given that there is no crowding out, the equilibrium gross domestic product can increase by a maximum of

(A) $7.5 billion
(B) $15 billion
(C) $40 billion
(D) $80 billion
(E) $120 billion

35. Which of the following results when the Federal Reserve sells bonds to commercial banks?

(A) The total assets held by commercial banks will eventually increase.
(B) The money supply decreases.
(C) The discount rate increases.
(D) The public increases its cash holdings.
(E) The required reserve ratio increases because of decreasing excess reserves.

36. Which of the following is true of a current account deficit?

(A) It is caused by a trade surplus.
(B) It must be financed with an equally large surplus of exports.
(C) It is caused by a deficit in the financial (capital) account.
(D) It will self-correct in the following year.
(E) It is financed by a surplus in the financial (capital) account.

37. Ying has just graduated from college and is now interviewing for jobs. Ying would best be described as

(A) cyclically unemployed
(B) frictionally unemployed
(C) structurally unemployed
(D) not in the labor force
(E) a discouraged worker

38. Which of the following combinations of changes in income taxes, real interest rate, and investment spending is most likely to promote economic growth?

	Income taxes	Interest Rate	Investment
(A)	Increase	Increase	Increase
(B)	Increase	Increase	Decrease
(C)	Increase	Decrease	Decrease
(D)	Decrease	Decrease	Decrease
(E)	Decrease	Decrease	Increase

39. Assume that the United States central hank sells government bonds on the open market. How will the sale affect the value of the United States dollar on the foreign exchange market and United States exports?

	Value of the Dollar	Exports
(A)	Increase	Decrease
(B)	No change	Decrease
(C)	Decrease	Decrease
(D)	Decrease	Increase
(E)	Increase	Increase

40. If a country has a balanced budget and then the country's government increases transfer payments without increasing taxes, which of the following will most likely occur?

(A) The government's budget will move into surplus, and the national debt will fall.
(B) The government's budget will move into surplus, and the national debt will rise.
(C) The government's budget will move into delicil, and the national debt will fall.
(D) The government's budget will move into deficit, and the national debt will rise.
(E) The government's budgct will move into surplus, and the national debt will remain unchanged.

41. As an indicator of an impending recession, inventories will most likely

(A) decrease as a result of a decrease in consumption
(B) increase as a result of a decrease in consumption
(C) increase as a result of a decrease in aggregate supply
(D) decrease as a result of an increase in aggregate supply
(E) remain constant as a result of economic uncertainty

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42. Which of the following would most likely benefit from unexpected deflation?

(A) Lenders
(B) Borrowers
(C) Retail shop owners
(D) Governments in debt
(E) Automobile manufacturing firms

43. An economy is at full-employment equilibrium. If consumers and firms become more optimistic about future income and profits, which of the following will occur in the short run?

(A) Aggregate demand will shift rightward, increasing real output and decreasing the price level.
(B) Aggregate demand will shift rightward, decreasing real output and increasing the price level.
(C) Aggregate demand will shift rightward, increasing real output and the price level.
(D) Short-run aggregate supply will shift rightward, increasing real output and the price level.
(E) Short-run aggregate supply will shift rightward, decreasing real output and the price level.

44. The demand curve for money shifts to the right when

(A) the nominal interest rate decreases
(B) the nominal gross domestic product increases
(C) the real gross domestic product decreases
(D) inflation decreases
(E) the velocity of money increases

45. An increase in both the inflation rate and the unemployment rate can be illustrated by

(A) a movement along the short-run Phillips curve
(B) a rightward shift of the short-run Phillips curve
(C) a leftward shift of the short-run Phillips curve
(D) a rightward shift of the aggregate demand curve
(E) a leftward shift of the aggregate demand curve

46. Assume Country X has the following international transactions, in billions of dollars, during a given period of time.

International Transactions	Value ($)
Exports	400
Imports	330
Foreign purchases of Country X's assets	210
Country X's purchase of foreign assets	280

What is the balance on the current account, in billions of dollars, for the period?

(A) −140
(B) −70
(C) −0
(D) +70
(E) +140

47. In the short run, a tight monetary policy tends to cause

(A) a decrease in the interest rate and a decrease in prices
(B) a decrease in the interest rate and an increase in private investment
(C) a decrease in prices and an increase in private investment
(D) an increase in the interest rate and an increase in private investment
(E) an increase in interest rate and a decrease in private investment

48. If the required reserve ratio is 10 percent, what is the maximum change in the money supply from John's deposit of $50,000 cash into his checking account?

(A) $5,000
(B) $45,000
(C) $55,000
(D) $450,000
(E) $500,000

49. Recession can be caused by

(A) an increase in the price level
(B) an increase in exports
(C) a decrease in interest rates
(D) a decrease in aggregate demand
(E) a decrease in wages

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GO ON TO THE NEXT PAGE.

50. An increase in the number of discouraged workers causes the unemployment rate to

(A) decrease along with the labor-force participation rate
(B) increase while the labor-force participation rate decreases
(C) stay the same because the workers are still unemployed
(D) decrease while the labor-force participation rate stays the same
(E) increase along with the labor-force participation rate

51. Which of the following will most likely result in an increase in aggregate demand?

(A) An increase in the interest rates charged on credit card balances
(B) A disruption in global oil supply
(C) An open-market purchase of government bonds by the central bank
(D) A reduction of pay and benefits for government employees
(E) A decrease in the wealth of households

52. For Arthur's graduation gift, Arthur's grandmother gives him a choice: he can receive $1,000 today or $1,050 one year from today. At what annual interest rate would Arthur be indifferent to choosing between the two options?

(A) 50%
(B) 10%
(C) 5%
(D) 2.5%
(E) 0.5%

53. Assume a country's economy is currently in long-run equilibrium. What is the long-run effect of an increase in aggregate demand?

(A) A decrease in the unemployment rate
(B) A decrease in the inflation rate
(C) A decrease in the long-run aggregate supply
(D) An increase in the price level
(E) An increase in the money supply

54. If foreign financial investors no longer see country A as a safe haven, which of the following will most likely occur in the short run?

(A) Country A's currency will appreciate.
(B) Country A's currency will depreciate.
(C) Country A's current account will move toward deficit.
(D) Country A's financial account will move toward surplus.
(E) Tariff revenues received by country A will decrease as investors seek investment elsewhere.

55. If the government has increased the budget deficit and interest rates have remained constant, which of the following is true?

(A) Government spending is less than tax revenue, and the central bank increases the money supply.
(B) Government spending is greater than tax revenue, and the central bank keeps the money supply constant.
(C) Government spending is greater than tax revenue, and the central bank increases the money supply.
(D) Government spending is greater than tax revenue, and the central bank decreases the money supply.
(E) Government spending is less than tax revenue, and the central bank keeps the money supply constant.

56. Suppose that the real interest rate is equal to seven percent and the expected inflation rate is currently three percent. If an oil crisis in the Middle East increases the expected inflation rate to four percent, the new nominal interest rate is equal to

(A) 3%
(B) 4%
(C) 7%
(D) 11%
(E) 14%

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57. Government investment in human capital is likely to shift

(A) the aggregate demand curve to the right in the short run and the aggregate supply curve to the right in the long run

(B) the aggregate demand curve to the left in the short run and the aggregate supply curve to the left in the long run

(C) the aggregate demand curve to the right in the short run and the long-run Phillips curve to the right

(D) the aggregate demand curve to the left in the long run

(E) the aggregate demand curve to the left in the short run and the long-run Phillips curve to the left

58. The consumer price index (CPI) does not measure the true cost of inflation because

(A) improvements in the quality of goods or services are not fully reflected

(B) lenders are better off when actual inflation is less than anticipated inflation

(C) borrowers are better off when actual inflation is greater than anticipated inflation

(D) changes in consumers' real income are not accounted for

(E) consumers may substitute toward more expensive goods without being significantly worse off

59. Which of the following statements about intlation is true in the short run?

(A) During a period of cost-push inflation, the economy's output will rise rapidly, along with the price level.

(B) The hasic difference hetween cost-push and demand-pull inflation lies in the rate at which the price level is rising.

(C) During a period of demand-pull inflation, the economy's output will be stagnant when the price level is rising.

(D) The economy's real ourpur increases when there is demand-pull inflation and decreases when there is cost-push inflation.

(E) Most instances of inflation start out being cost-push, and then turn into demand-pull.

60. Which of the following policy actions will directly increase the money supply?

(A) The central bank purchases government bonds on the open market.

(B) The central bank sells government bonds on the open market.

(C) The government increases taxes without changing its spending.

(D) The government decreases taxes without changing its spending.

(E) The government decreases taxes while simultaneously decreasing its spending.

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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**

AP® Macroeconomics Exam

SECTION II: Free Response

2017

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
   ☐☐☐☐☐☐
4. Unless I check the box below, I grant the College Board the unlimited right to use, reproduce, and publish my free-response materials, both written and oral, for educational research and instructional purposes. My name and the name of my school will not be used in any way in connection with my free-response materials. I understand that I am free to mark "No" with no effect on my score or its reporting.
   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 4NBP4-S

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. Assume that a country's economy is in a short-run equilibrium and the actual unemployment rate is lower than the natural rate of unemployment.

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

      (i) Current price level, labeled PL_1, and current output level, labeled Y_1

      (ii) The full-employment output level, labeled Y_F

   (b) What open market operation can the country's central bank use to move the economy toward its long run equilibrium?

   (c) Use a correctly labeled money-market graph to show how the country's central bank action to move the economy toward its long-run equilibrium affects the equilibrium nominal interest rate in the short run.

   (d) Based on the interest rate change from part (c), will each of the following increase, decrease, or remain the same in the short run?

      (i) Real output. Explain.

      (ii) Natural rate of unemployment

   (e) Assume instead that the central bank does not pursue the monetary policy action from part (b) and there was no other government intervention. Will each of the following increase, decrease, or remain the same in the long run?

      (i) Short-run aggregate supply. Explain.

      (ii) Employment

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ANSWER PAGE FOR QUESTION 1

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Question 1 is reprinted for your convenience.

1. Assume that a country's economy is in a short-run equilibrium and the actual unemployment rate is lower than the natural rate of unemployment.

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

   (i) Current price level, labeled PL_1, and current output level, labeled Y_1

   (ii) The full-employment output level, labeled Y_F

   (h) What open-market operation can the country's central bank use to move the economy toward its long-run equilibrium?

   (c) Use a correctly labeled money-market graph to show how the country's central bank action to move the economy toward its long-run equilibrium affects the equilibrium nominal interest rate in the short run.

   (d) Based on the interest rate change from part (c), will each of the following increase, decrease, or remain the same in the short run?

   (i) Real output. Explain.

   (ii) Natural rate of unemployment

   (e) Assume instead that the central bank does not pursue the monetary policy action from part (b) and there was no other government intervention. Will each of the following increase, decrease, or remain the same in the long run?

   (i) Short-run aggregate supply. Explain.

   (ii) Employment

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2. The following is the balance sheet for Raymond Bank, one of many commercial banks in a country.

Assets		Liabilities and Equity	
Reserves	$5,000	Demand deposits	$20,000
Business loans	$10,000		
Student loans	$8,000		
Government securities	$2,000	Equity (Net worth)	$5,000
Total assets	$25,000	Total liabilities and equity	$25,000

Assume a 10 percent reserve requirement.

(a) Calculate Raymond Bank's required reserves.

(b) Calculate the maximum amount of additional loans that Raymond Bank can make without selling its holdings of government securities.

(c) Assuming that Raymond Bank and other banks now lend out all excess reserves, calculate the maximum possible change in the following.

(i) Demand deposits throughout the banking system

(ii) Total reserves throughout the banking system

(d) Suppose that the country's central bank purchases $1,000 of Raymond Bank's holdings of government securities as part of its open-market operations. Do Raymond Bank's required reserves initially increase, decrease, or remain the same as a result of the central bank's purchase? Explain.

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ANSWER PAGE FOR QUESTION 2

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3. Singapore and Japan are trading partners. The Japanese economy is operating at full employment, and Japan's current account balance is zero.

(a) Assume the exchange rate between the Singapore dollar (SGD) and the Japanese yen (JPY) changes from 1 SGD = 82 JPY to 1 SGD = 65 JPY. Does the JPY appreciate or depreciate against the SGD?

(b) Given your answer in part (a), will each of the following increase, decrease, or remain the same?

(i) The price of Japanese goods in Singapore dollars

(ii) Japan's net exports

(c) Draw a single correctly labeled graph with the long-run Phillips curve and short-run Phillips curve for Japan. On the graph, show the new short-run equilibrium as a result of the change in Japan's net exports from part (b)(ii), labeled point X.

(d) Given your answer in part (b)(ii), will cach of the following be in deficit, surplus, or zero for Japan?

(i) Current account balance

(ii) Financial (capital) account balance

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ANSWER PAGE FOR QUESTION 3

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END OF EXAM

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