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AP[®] Macroeconomics Exam

SECTION I: Multiple Choice

2014

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

At a Glance

Total Time

1 hour, 10 minutes

Number of Questions

60

Percent of Total Score

66.67%

Writing Instrument

Pencil required

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) ● (C) (D) (E)

(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.

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Form I

Form Code 4JBP6-S

35

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DO NOT seal answer sheet inside

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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. Which of the following is the most fundamental issue that economics addresses?
 - (A) Choice of appropriate technology
 - (B) Reduction of unemployment
 - (C) Reduction of budget deficit
 - (D) Promotion of privatization
 - (E) Use of scarce resources
2. Inflation occurs when there is a sustained increase in which of the following?
 - (A) Real gross domestic product
 - (B) The average price level
 - (C) The price of any commodity
 - (D) Labor productivity
 - (E) The unemployment rate
3. Which of the following is LEAST likely to promote economic growth?
 - (A) Investment in tools and machines
 - (B) Investment in training of labor
 - (C) Increase in consumption of nondurable goods
 - (D) Tax credit for technology improvement
 - (E) Increase in the labor force participation rate
4. An increase in spending in an economy will cause a multiplied increase in gross domestic product because
 - (A) government spending is greater than zero
 - (B) investment is greater than zero
 - (C) investment increases as income decreases
 - (D) consumption increases as income increases
 - (E) taxes increase as income increases
5. A contraction in the money supply will most likely change the nominal interest rate and aggregate demand in which of the following ways in the short run?

<u>Nominal Interest Rate</u>	<u>Aggregate Demand</u>
(A) Increase	Decrease
(B) Increase	Increase
(C) Increase	Not change
(D) Decrease	Decrease
(E) Decrease	Increase
6. If the economy is in a severe recession, which of the following policy actions is most appropriate?
 - (A) Keeping the money supply constant and reducing budget deficits
 - (B) Decreasing government spending and taxes by the same amount
 - (C) Increasing both the money supply and government spending
 - (D) Increasing both the federal funds rate and taxes
 - (E) Decreasing the money supply and increasing taxes
7. Of the following, the most liquid asset is
 - (A) mutual funds
 - (B) currency
 - (C) time deposits
 - (D) demand deposits
 - (E) savings deposits

Questions 8-9 refer to the income and consumption data presented in the table below.

Assume a closed economy with no government and a marginal propensity to consume of 0.80.

<u>Disposable Income</u>	<u>Consumption</u>
\$620	\$624
\$640	\$640
\$660	\$656
\$680	\$672
\$700	\$688
\$720	\$704
\$740	\$720
\$760	\$736

8. Dissaving occurs when disposable income is

- (A) \$620
- (B) \$640
- (C) \$660
- (D) \$700
- (E) \$1,000

9. The marginal propensity to save for this economy is

- (A) 4.0
- (B) 1.0
- (C) 0.8
- (D) 0.2
- (E) 0

10. An increase in government spending will affect the demand for money and nominal interest rates in which of the following ways?

<u>Demand for Money</u>	<u>Nominal Interest Rates</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) Increase	Indeterminate
(D) Decrease	Increase
(E) Decrease	Decrease

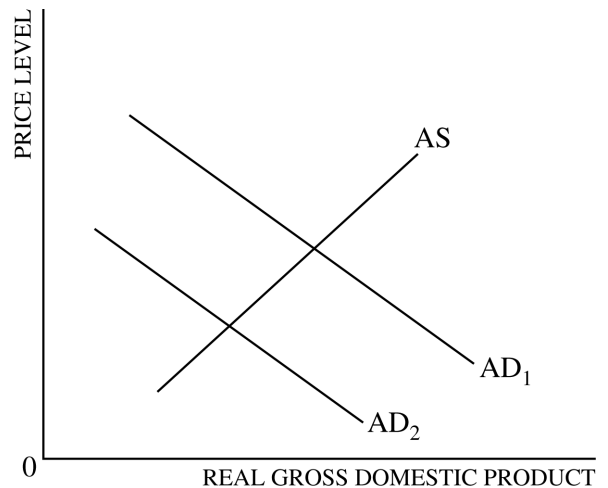
11. Which of the following policies, if appropriately sized, would provide expansion during a recession with the smallest change in interest rates?

- (A) An open-market purchase of government securities by the central bank and a decrease in the federal funds rate
- (B) An open-market sale of government securities by the central bank and an increase in the federal funds rate
- (C) A decrease in taxes and an open-market purchase of government securities by the central bank
- (D) An increase in government spending and an open-market sale of government securities by the central bank
- (E) An increase in taxes and an increase in the federal funds rate

12. In the circular flow diagram of a market economy, which of the following supplies the factors of production?

- (A) The business sector
- (B) The government
- (C) The household sector
- (D) Financial sector
- (E) The foreign sector

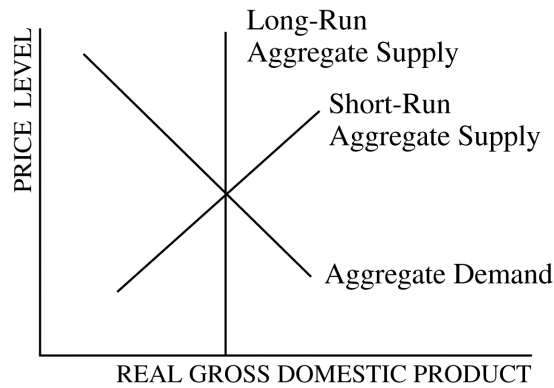
13. If the velocity of money is constant and the aggregate supply curve is vertical, a doubling of the money supply would most likely result in a doubling of
- (A) the unemployment rate
 - (B) real output
 - (C) the price level
 - (D) nominal interest rates
 - (E) real interest rates
14. An increase in which of the following would most likely result in an increase in aggregate supply?
- (A) The price level
 - (B) Aggregate demand
 - (C) Unemployment compensation
 - (D) Labor-force participation rate
 - (E) The minimum wage
15. The main benefit of free trade between two countries is that
- (A) income distribution in each country will become more equitable
 - (B) employment in each country will increase
 - (C) migration from one country to the other will increase
 - (D) each country can consume beyond its constraints of resources and productivity
 - (E) each country will become more self-sufficient
16. Assume that the public holds part of its money in cash and the rest in checking accounts. If the central bank lowers the reserve requirement from 16 percent to 8 percent, the money supply will
- (A) decrease by more than half
 - (B) decrease by half
 - (C) decrease by less than half
 - (D) exactly double
 - (E) increase by less than double



17. The graph above shows two aggregate demand curves, AD_1 and AD_2 , and an aggregate supply curve, AS . The shift in the aggregate demand curve from AD_1 to AD_2 could be caused by
- (A) a decrease in taxes
 - (B) a decrease in the money supply
 - (C) an increase in government spending
 - (D) an increase in consumption spending
 - (E) an increase in the price level
18. An increase in the international value of the United States dollar will most likely benefit
- (A) domestic producers of premium wines sold to people in other countries
 - (B) currency traders holding large quantities of yen
 - (C) German citizens vacationing in the United States
 - (D) Canadian citizens expecting to purchase real estate in the United States
 - (E) retired United States citizens living overseas on their social security checks
19. Which of the following will cause an increase in aggregate demand?
- (A) An increase in the price level
 - (B) A decrease in income taxes
 - (C) An increase in the demand for money
 - (D) A decrease in the supply of money
 - (E) A decrease in government transfer payments

20. If wages are sticky, which of the following policies will be the most effective in raising real gross domestic product to the full-employment level?
- (A) Doing nothing, since there are automatic stabilizers
 - (B) The sale of bonds by the Federal Reserve
 - (C) An increase in the income tax
 - (D) An increase in government spending
 - (E) An increase in the discount rate
21. Suppose that Country A is experiencing high inflation relative to Country B, which is enjoying steady growth with a stable price level. Which of the following would occur in the foreign exchange market?
- (A) An increase in the demand for Country A's currency
 - (B) An increase in the supply of Country B's currency
 - (C) A decrease in the supply of Country A's currency
 - (D) A decrease in the demand for Country B's currency
 - (E) A depreciation of Country A's currency
22. Which of the following will most likely cause an increase in real output in the long run?
- (A) A decrease in the labor force participation rate
 - (B) An increase in the velocity of money
 - (C) An open-market sale of government bonds by the central bank
 - (D) An increase in immigration from abroad
 - (E) An increase in the price level
23. Potential gross domestic product will decrease under which of the following conditions?
- (A) The growth rate of the population increases more rapidly than the growth rate of gross domestic product.
 - (B) Nominal gross domestic product increases more than real gross domestic product.
 - (C) The natural rate of unemployment decreases.
 - (D) The country's annual depreciation is greater than its annual gross investment.
 - (E) The monetary authorities adopt an easy monetary policy.
24. Which of the following actions by the Federal Reserve of the United States increases the money supply?
- (A) Buying government bonds on the open market
 - (B) Selling government bonds on the open market
 - (C) Increasing the reserve requirement
 - (D) Increasing the discount rate
 - (E) Increasing the federal funds rate
25. If the production technology of a good improves and at the same time the number of consumers willing and able to buy the good in the market increases, which of the following will definitely occur?
- (A) Equilibrium price will increase.
 - (B) Equilibrium price will decrease.
 - (C) Equilibrium quantity will increase.
 - (D) Equilibrium quantity will decrease.
 - (E) Equilibrium quantity will remain the same.
26. An increase in which of the following will most likely increase productivity?
- (A) Population growth rate
 - (B) Aggregate demand
 - (C) Capital stock
 - (D) Consumption
 - (E) Employment
27. The short-run aggregate supply curve would be vertical if
- (A) nominal wages adjust immediately to changes in the price level
 - (B) nominal wages adjust slowly when there is unemployment
 - (C) both nominal wages and prices adjust slowly to changes in aggregate demand
 - (D) the spending multiplier is very low
 - (E) investment demand is very responsive to changes in interest rates
28. Increases in the real per capita income of a country are most closely associated with increases in which of the following?
- (A) The labor force
 - (B) The price level
 - (C) The money supply
 - (D) Productivity
 - (E) Tax rates

29. The consumer price index (CPI) is criticized for
- (A) overstating the true burden of inflation because it does not recognize consumers' ability to substitute goods and services as prices change
 - (B) overstating the true burden of inflation because it recognizes consumers' ability to substitute goods and services as prices change
 - (C) understating the true burden of inflation because it does not recognize consumers' ability to substitute goods and services as prices change
 - (D) understating the true burden of inflation because it recognizes consumers' ability to substitute goods and services as prices change
 - (E) overstating the true burden of inflation because it reflects the prices of both intermediate goods and final goods
30. A rightward shift of the short-run Phillips curve is most likely due to
- (A) an increase in aggregate demand
 - (B) a decrease in aggregate demand
 - (C) a decrease in the expected rate of inflation
 - (D) an increase in the expected rate of inflation
 - (E) an increase in aggregate supply
31. If the marginal propensity to consume is 0.75, then a \$100 increase in investment will result in a maximum increase in equilibrium real gross domestic product of
- (A) \$40.00
 - (B) \$100.00
 - (C) \$133.33
 - (D) \$400.00
 - (E) \$500.00
32. Frictional unemployment occurs when which of the following happens?
- (A) A worker is replaced by robots on factory assembly lines.
 - (B) A worker voluntarily quits a job to search for a better one.
 - (C) A worker is laid off because of a downturn in economic activity.
 - (D) A worker undergoes on-the-job training.
 - (E) A worker switches from working full-time to part-time.



33. On the graph above, stagflation will be caused by a
- (A) leftward shift in the short-run aggregate supply curve only
 - (B) rightward shift in the short-run aggregate supply curve only
 - (C) leftward shift in the aggregate demand curve only
 - (D) rightward shift in the aggregate demand curve only
 - (E) rightward shift in both the short-run aggregate supply and aggregate demand curves

34. As a component of aggregate demand, investment refers to the

- (A) purchase of raw land for later resale
- (B) purchase of stocks and bonds
- (C) purchase of new equipment and additional inventories
- (D) difference between people's income and spending
- (E) dividends paid out to shareholders

35. If a contractionary fiscal policy is followed by an expansionary monetary policy, nominal interest rate and employment would most likely be affected in which of the following ways in the short run?

<u>Nominal Interest Rate</u>	<u>Employment</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) Decrease	Decrease
(D) Decrease	Indeterminate
(E) Indeterminate	Decrease

36. Assume that the aggregate supply curve is upward sloping. If both aggregate supply and aggregate demand increase, what will happen to the equilibrium output and price level?

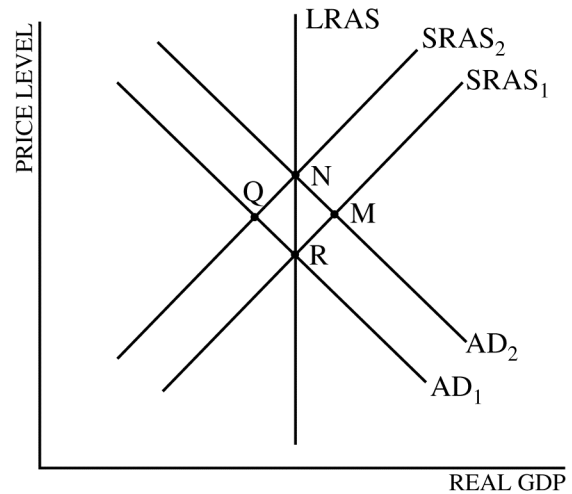
<u>Output</u>	<u>Price Level</u>
(A) Decrease	Decrease
(B) Decrease	Increase
(C) Indeterminate	Increase
(D) Increase	Indeterminate
(E) Increase	Increase

37. Which of the following will lead to a depreciation of a nation's currency?

- (A) Lower inflation in the nation than in the rest of the world
- (B) Higher required reserve ratio in the nation than in the rest of the world
- (C) Decreased real interest rates in the nation compared with the rest of the world
- (D) Increased demand for the nation's currency
- (E) Decreased supply of the nation's currency

38. Country A's growth rate in per capita real gross domestic product (GDP) has been consistently higher than that of Country B. Which of the following factors can account for these differences in the per capita GDP growth rates?

- (A) Country B's government gives more investment tax credits.
- (B) The labor force of Country A is becoming more skilled than the labor force of Country B.
- (C) The natural rate of unemployment is higher in Country A.
- (D) Country A's central bank is less effective at controlling the inflation rate.
- (E) Although the populations of Countries A and B are the same, Country A has twice as many people who are retired.



39. According to the graph above and starting with equilibrium point R, which of the following shifts identifies the short-run and the long-run impact of a demand-pull inflation?

<u>Short Run</u>	<u>Long Run</u>
(A) R to N	M to N
(B) R to M	R to N
(C) R to Q	Q to N
(D) R to M	R to Q
(E) R to N	N to Q

40. If the central bank raises the required reserve ratio, the money multiplier and the money supply will change in which of the following ways?

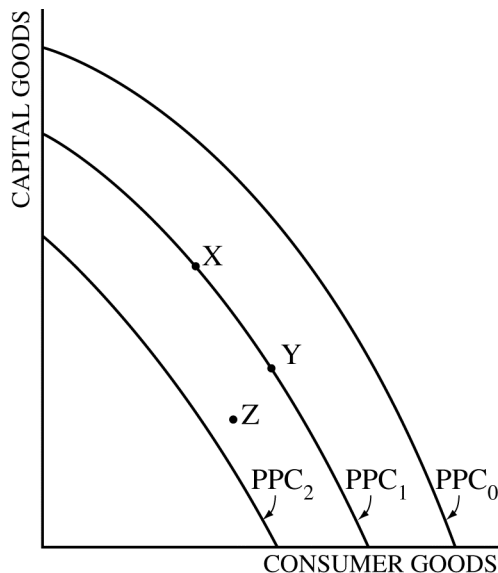
<u>Money Multiplier</u>	<u>Money Supply</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) Increase	No change
(D) Decrease	No change
(E) Decrease	Decrease

41. In the short run, government deficit spending will most likely

- (A) raise the unemployment rate
- (B) lower the inflation rate
- (C) raise nominal interest rates
- (D) lower private savings
- (E) raise net exports

42. An increase in the price level will most likely cause which of the following?
- (A) A leftward shift of the aggregate demand curve
 - (B) An increase in the demand for money
 - (C) An increase in the real interest rate
 - (D) A decrease in the nominal interest rate
 - (E) An increase in the supply of money
43. The purchase of United States government bonds by Japanese investors will be included in Japan's
- (A) current account
 - (B) financial account (formerly called capital account)
 - (C) trade deficit
 - (D) foreign direct investment
 - (E) imports
44. Assume that the marginal propensity to consume out of disposable income is 0.8 and that the government taxes all income at a constant rate of 30 percent. If gross income increases by \$100, consumption will initially increase by
- (A) \$44
 - (B) \$56
 - (C) \$70
 - (D) \$80
 - (E) \$100
45. Public policy that generates an unexpected increase in consumer prices will inflict short-run costs on all of the following EXCEPT
- (A) borrowers
 - (B) workers with fixed incomes
 - (C) savers holding non-interest-bearing money
 - (D) taxpayers shifted into higher tax brackets
 - (E) people whose incomes are not adjusted for inflation
46. If aggregate demand is growing faster than long-run aggregate supply, the Federal Reserve is most likely to
- (A) sell securities on the open market
 - (B) increase bond prices
 - (C) increase income taxes
 - (D) decrease the discount rate
 - (E) decrease the required reserve ratio
47. Assume that Country A exports one bushel of wheat in exchange for 2.5 bushels of corn from Country B. If the terms of trade are beneficial to both countries, which of the following must be true?
- (A) Country A has an absolute advantage in the production of wheat.
 - (B) The cost of producing a bushel of wheat in Country A is less than 2.5 bushels of corn.
 - (C) The cost of producing a bushel of wheat in Country A is greater than 2.5 bushels of corn.
 - (D) Country A is producing inside its current production possibilities curve.
 - (E) Country A needs to use more resources to produce wheat than to produce corn.
48. Which of the following is true of the opportunity cost of holding cash?
- (A) It is zero.
 - (B) It is represented by the value of the dollar.
 - (C) It is equal to the price level.
 - (D) It decreases as the price level rises.
 - (E) It increases as the interest rate rises.
49. The natural rate of unemployment can be defined as the
- (A) unemployment rate consistent with accelerating inflation
 - (B) unemployment rate of the least-skilled workers
 - (C) economy's long-run equilibrium rate of unemployment
 - (D) labor force participation rate plus the unemployment rate
 - (E) labor force participation rate minus the unemployment rate
50. In the long run, an increase in aggregate demand due to an expansion in the money supply will increase
- (A) price level and real output
 - (B) nominal output and real output
 - (C) nominal output but not the price level
 - (D) nominal output and the price level
 - (E) real output but not the price level

51. Rational expectations theory suggests that people
- (A) do not estimate future inflation rates because it is impossible to do so
 - (B) believe that current inflation should be the same as last year's
 - (C) assume that current inflation will be the same for next year
 - (D) use all available information in forming their expectations about future inflation
 - (E) assume that current inflation will be equal to the average inflation of the past decade
52. Following a decrease in the real interest rate, there is an increase in financial capital outflows from Country A. The increase in capital outflows will most likely have which of the following effects on Country A's net exports and aggregate demand?
- | | <u>Net Exports</u> | <u>Aggregate Demand</u> |
|-----|--------------------|-------------------------|
| (A) | Decrease | Decrease |
| (B) | Decrease | No change |
| (C) | Increase | Increase |
| (D) | Increase | Decrease |
| (E) | Increase | No change |
53. If the required reserve ratio is 10 percent, actual reserves are \$10 million, and currency in circulation is equal to \$20 million, M1 will at most be equal to
- (A) \$20 million
 - (B) \$30 million
 - (C) \$90 million
 - (D) \$120 million
 - (E) \$150 million
54. For an economy that is operating inside its production possibilities curve, which of the following is true?
- (A) It can increase the production of both goods.
 - (B) Its population is growing faster than the economy's ability to increase production.
 - (C) It is using all available resources efficiently.
 - (D) It cannot move to a point on the production possibilities curve with available technology.
 - (E) It lacks the resources to increase production beyond its current output.
55. If unemployed workers become discouraged and give up trying to find work, the number of workers employed and the unemployment rate would change in which of the following ways?
- | | <u>Number of Workers Employed</u> | <u>Unemployment Rate</u> |
|-----|-----------------------------------|--------------------------|
| (A) | Decrease | Decrease |
| (B) | Decrease | Increase |
| (C) | Decrease | No change |
| (D) | No change | Decrease |
| (E) | No change | Increase |
56. Which of the following is true of the Phillips curve?
- (A) It is vertical in the short run, but is upward sloping in the long run.
 - (B) It is upward sloping in the short run, but is downward sloping in the long run.
 - (C) It is downward sloping in the short run, but is vertical in the long run.
 - (D) It shows trade-offs between unemployment and inflation in the long run but not in the short run.
 - (E) It is upward sloping both in the short run and in the long run if inflation is anticipated correctly.



57. The diagram above shows three production possibilities curves (PPCs). If the current PPC is PPC_1 , which of the following changes indicates a recession?

- (A) Movement from point X to point Y
- (B) Movement from point Y to point X
- (C) Movement from point Y to point Z
- (D) Shift from PPC_1 to PPC_0
- (E) Movement from point Z to point X

58. If wages and prices are perfectly flexible and inflation is correctly anticipated, then an expansionary monetary policy will affect the real output and price level in which of the following ways?

<u>Real Output</u>	<u>Price Level</u>
--------------------	--------------------

- | | |
|----------------|------------|
| (A) Increase | Increase |
| (B) Increase | Decrease |
| (C) Increase | Not change |
| (D) Not change | Increase |
| (E) Not change | Not change |

59. If the value of the United States dollar increases on the foreign exchange market, which of the following is most likely to occur in the short run?

- (A) Aggregate demand will decrease.
- (B) Aggregate demand will increase.
- (C) Aggregate supply will decrease.
- (D) Both aggregate demand and aggregate supply will decrease.
- (E) Both aggregate demand and aggregate supply will increase.

60. Assume that the reserve requirement for demand deposits is 20 percent, that banks hold no excess reserves, and that the public holds no currency. If the central bank sells \$10,000 worth of government securities to commercial banks, the total money supply will

- (A) increase by \$10,000
- (B) increase by \$50,000
- (C) decrease by \$10,000
- (D) decrease by \$50,000
- (E) not 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**

AP[®] Macroeconomics Exam

SECTION II: Free Response

2014

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

Reading Period

Time

10 minutes. Use this time to read the questions and plan your answers.

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. Do NOT begin writing on the lined pages until the proctor tells you to do so.

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 4JBP6-S

35

MACROECONOMICS

Section II

Planning Time—10 minutes

Writing Time—50 minutes

Directions: You have 10 minutes to read all of the questions in this booklet, to sketch graphs, to make notes, and to plan your answers. You will then have 50 minutes to answer all three of the following questions. 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. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. 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.

GO ON TO THE NEXT PAGE.

1. Assume that the economy of country Alpha is operating at the full-employment equilibrium.
 - (a) Using a correctly labeled graph of aggregate demand, short-run aggregate supply, and long-run aggregate supply, show the equilibrium, labeling the equilibrium price level as PL_1 and the equilibrium output as Y_1 .
 - (b) Now assume that the economy of country Beta, a major trading partner of Alpha, enters a recession. On your graph from part (a), show the effect of country Beta's recession on each of the following in country Alpha in the short run.
 - (i) Aggregate demand. Explain.
 - (ii) Real output and price level, labeled as Y_2 and PL_2
 - (c) The central bank of Alpha wishes to offset the effect of Beta's recession on Alpha's real output. What open-market operation should the central bank of Alpha undertake?
 - (d) Draw a correctly labeled graph of the money market for Alpha, and show the effect of the open-market operation you identified in part (c) on the nominal interest rate in the short run.
 - (e) Assume now that the real interest rate in Beta becomes greater than the real interest rate in Alpha. Based on the change in real interest rate, answer each of the following.
 - (i) Will financial capital flow from Alpha to Beta or from Beta to Alpha?
 - (ii) Will the value of Alpha's currency on the foreign exchange market relative to Beta's currency appreciate, stay the same, or depreciate? Explain.

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.

[illegible]

Question 1 is reprinted for your convenience.

1. Assume that the economy of country Alpha is operating at the full-employment equilibrium.
 - (a) Using a correctly labeled graph of aggregate demand, short-run aggregate supply, and long-run aggregate supply, show the equilibrium, labeling the equilibrium price level as PL_1 and the equilibrium output as Y_1 .
 - (b) Now assume that the economy of country Beta, a major trading partner of Alpha, enters a recession. On your graph from part (a), show the effect of country Beta's recession on each of the following in country Alpha in the short run.
 - (i) Aggregate demand. Explain.
 - (ii) Real output and price level, labeled as Y_2 and PL_2
 - (c) The central bank of Alpha wishes to offset the effect of Beta's recession on Alpha's real output. What open-market operation should the central bank of Alpha undertake?
 - (d) Draw a correctly labeled graph of the money market for Alpha, and show the effect of the open-market operation you identified in part (c) on the nominal interest rate in the short run.
 - (e) Assume now that the real interest rate in Beta becomes greater than the real interest rate in Alpha. Based on the change in real interest rate, answer each of the following.
 - (i) Will financial capital flow from Alpha to Beta or from Beta to Alpha?
 - (ii) Will the value of Alpha's currency on the foreign exchange market relative to Beta's currency appreciate, stay the same, or depreciate? Explain.

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.

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2. The simplified T-account (balance sheet) for Zenith Bank in the country of Everland is shown below. Assume the reserve requirement in Everland is 20 percent.

Assets		Liabilities	
Reserves	\$80 million	Deposits	\$200 million
Loans	160 million	Net worth (Owners' equity)	40 million

- (a) Calculate the maximum amount by which Zenith Bank can increase its loans.
- (b) Based on your answer in part (a), calculate the maximum possible increase in Everland's money supply.
- (c) Identify one reason that Everland's money supply may expand by a smaller amount than the amount you identified in part (b).
- (d) Assume the central bank of Everland purchases \$10 million in government securities from the public. If the public deposits the \$10 million in Zenith Bank, by how much will Zenith Bank's required reserves change as a result of the new deposit?
- (e) What will happen to the price of bonds as a result of the central bank's purchase of government securities described in part (d) ?

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

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WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

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3. Unemployment is an economic problem that a nation frequently faces.

EMPLOYMENT DATA FOR COUNTRY X

Population	1,000
Employed	720
Not working but actively seeking employment	80
Not working and not seeking employment	200

- (a) Using the data from the table above, calculate the unemployment rate, as a percentage, for Country X.
- (b) Assume that the natural rate of unemployment for Country X is 6 percent.
- (i) Draw a single correctly labeled graph and show both the short-run Phillips curve and the long-run Phillips curve.
- (ii) Using the unemployment rate you calculated in part (a) and assuming an actual inflation rate of 2 percent, show the current combination of unemployment and inflation on your graph in part (b)(i), and label it as Z.
- (c) In the absence of any policy action, will the short-run aggregate supply for Country X increase, decrease, or remain constant in the long run? Explain.
- (d) If the actual unemployment rate equals the natural rate of 6 percent, is there cyclical unemployment in Country X?

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.

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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(ES) ON THE COVER(S).**
- **MAKE SURE YOU HAVE USED THE SAME SET OF AP NUMBER LABELS ON ALL AP EXAMS YOU HAVE TAKEN THIS YEAR.**

AP Macroeconomics

2014

APPENDIX - ANSWERS

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

**Answer Key for AP Macroeconomics
Practice Exam, Section I**

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

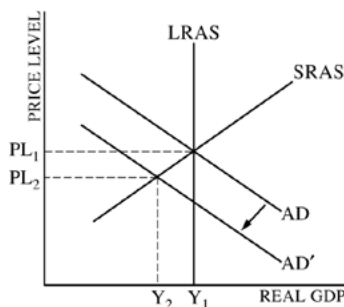
Free-Response Scoring Guidelines

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

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Question 1

9 Points (2+2+1+2+2)



(a) 2 points:

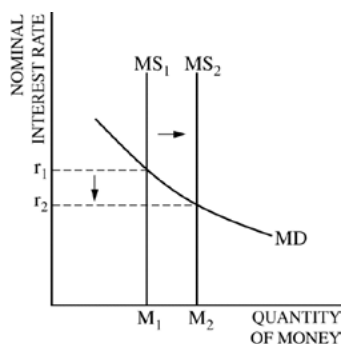
- One point is earned for drawing a correctly labeled graph, AD and SRAS, and showing Y_1 and PL_1 .
- One point is earned for drawing a vertical LRAS at Y_1 .

(b) 2 points:

- One point is earned for showing a leftward shift of the AD curve and showing a lower real output, Y_2 and price level, PL_2 .
- One point is earned for explaining that the recession in Beta decreases the demand for Alpha's products, and therefore Alpha's exports to Beta will decrease.

(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 graph of the money market.
- One point is earned for showing a rightward shift of the money supply curve leading to a lower interest rate.

(e) 2 points:

- One point is earned for stating that financial capital will flow from Alpha to Beta.
- One point is earned for stating that the value of Alpha's currency will depreciate and for explaining that higher interest rate in Beta will increase the demand for its financial assets, increasing the supply of Alpha's currency (or decreasing the demand for Alpha's currency).

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2014 SCORING GUIDELINES

Question 2

5 points (1+1+1+1+1)

(a) 1 point:

- One point is earned for calculating the maximum loan:
Maximum loan amount = Excess reserves = $\$80 - (0.2 \times \$200) = \$40$ million.

(b) 1 point:

- One point is earned for calculating the maximum increase in the money supply (MS):
Change in the MS = $(1/.20) \times (\$40) = \200 million.

(c) 1 point:

- One point is earned for stating that either the public may not redeposit all the money back in the account (cash leakages) or the bank may choose to hold additional reserves.

(d) 1 point:

- One point is earned for stating that the bank's required reserves will increase by \$2 million.

(e) 1 point:

- One point is earned for stating that the price of bonds will increase.

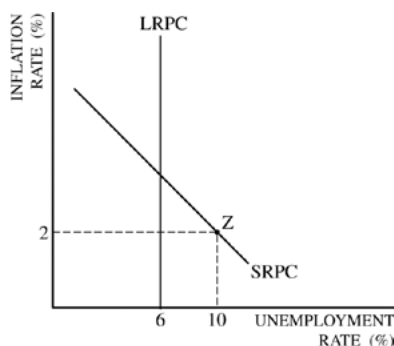
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2014 SCORING GUIDELINES**

Question 3

5 points (1+2+1+1)

(a) 1 point:

- One point is earned for calculating the unemployment rate (UR):
$$\text{UR} = \text{Number of unemployed} / \text{Labor force} = 80 / 800 = 10\%.$$



(b) 2 points:

- One point is earned for correctly labeled graph of the Phillips curve, a downward-sloping short-run, and a vertical long-run Phillips curve
- One point is earned for showing point Z on the short-run Phillips curve at the coordinates (10, 2).

(c) 1 point:

- One point is earned for stating that the SRAS curve will shift to the right and for explaining that input costs will fall in the long run. (Note: Stating that inflationary expectation will decrease is acceptable).

(d) 1 point:

- One point is earned for stating that there is no cyclical unemployment.