

**Name:**  
**ID:**

**Department of Economics**  
**Iowa State University**  
**Principles of Macroeconomics**  
Spring 2011, Final Exam

**Directions:**

**Do Not Open This Booklet Until Told To Do So.**

- Print your name and University ID number on this page
- Fill in your name, birth date, and ID on the bubble sheet, and write the exam version number at the top of your bubble sheet.
- Answer multiple choice questions on the bubble-sheet, and answer the rest of the questions in this book.
- There are 110 points total on the exam.

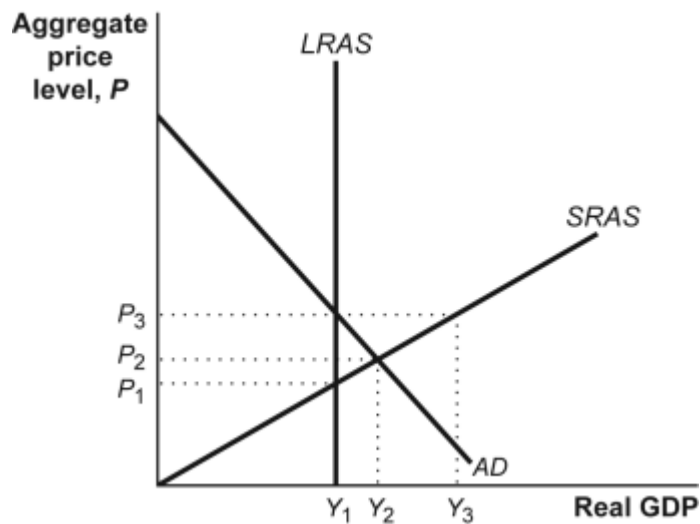
**Multiple choice questions. 2 points each**

Answer the following questions on the bubble sheet provided.

1. Government spending increases to provide funding for tuition assistance for qualified college students. Which of the following is likely to result?
  - A) Automatic stabilizers will increase the expansionary impact of the increase in aggregate demand.
  - B) Automatic stabilizers will increase the contractionary impact of the decrease in aggregate demand.
  - C) Automatic stabilizers will decrease the expansionary impact of the increase in aggregate demand.
  - D) Automatic stabilizers will decrease the contractionary impact of the increase in aggregate demand.

Use the following to answer question 2:

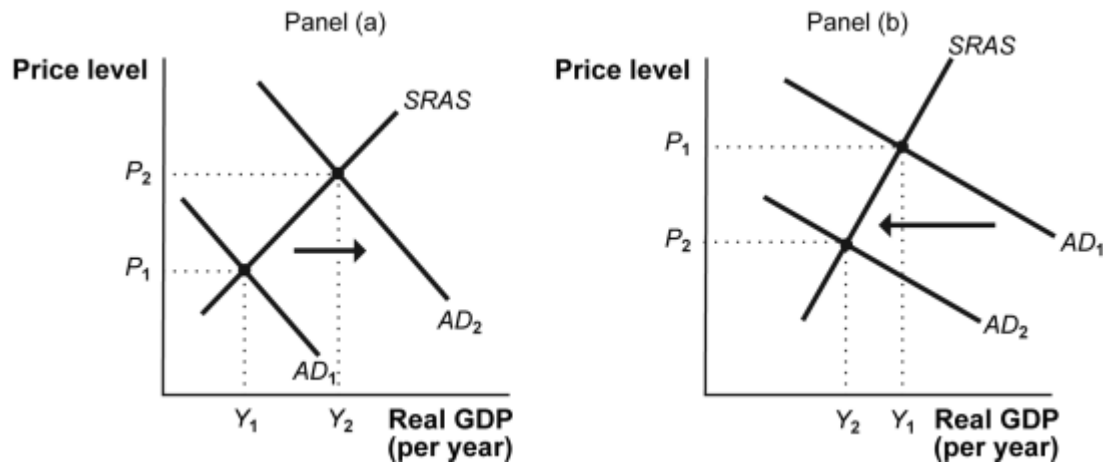
**Figure: Monetary Policy II**



2. (Figure: Monetary Policy II) Starting from short-run equilibrium at  $Y_2$ , to eliminate the inflationary gap, monetary policy should be:
  - A) contractionary.
  - B) neutral.
  - C) balanced.
  - D) expansionary.

Use the following to answer question 3:

**Figure: The Money Supply and Aggregate Demand**



3. (Figure: The Money Supply and Aggregate Demand) Panel (a) illustrates what happens when the Fed decides to \_\_\_\_\_ the money supply and \_\_\_\_\_ interest rates.
  - A) lower; increase
  - B) increase; lower
  - C) lower; lower
  - D) increase; increase
  
4. From 1999 to 2008 Zimbabwe's prices:
  - A) increased by 100%.
  - B) increased by 4.5 trillion percent.
  - C) increased by 50%.
  - D) decreased by 50%.
  
5. The relationships between a country's level of saving and investment have:
  - A) a relationship with trade surpluses only.
  - B) often been used to correct a trade deficit, but not a trade surplus.
  - C) an effect on a country's trade balances.
  - D) no impact for open economies.

6. The long-run Phillips curve:
  - A) suggests that policies have little impact on the natural rate of unemployment in the long run.
  - B) shows the positive relationship that exists between the unemployment rate and the inflation rate.
  - C) depicts the negative relationship between the unemployment rate and the inflation rate.
  - D) explains how expansionary policies can affect an economy, while contractionary policies have little impact.
  
7. Real GDP is the same as
  - A) nominal GDP.
  - B) value added GDP.
  - C) inflation adjusted GDP.
  - D) current dollar GDP.
  
8. The Fed monetizes the debt when it:
  - A) sells bonds.
  - B) targets interest rates.
  - C) prints money and buys government debt from the public.
  - D) decreases the money supply.

Use the following to answer question 9:

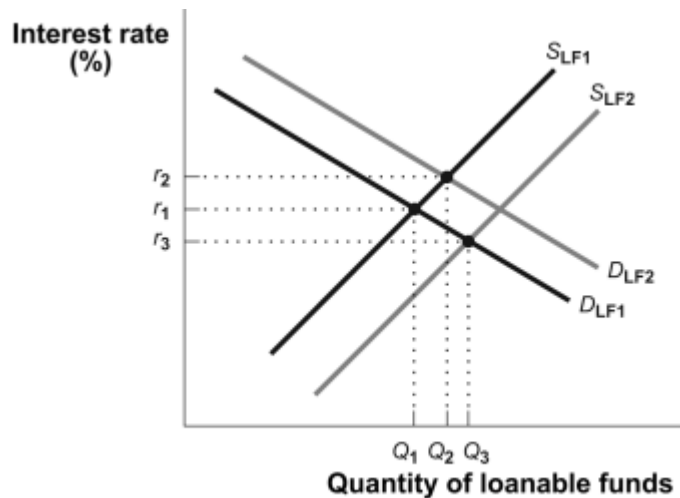
**Table: Hypothetical Relationship between Physical Capital per Worker and the Growth Rate of Productivity**

Increase in physical capital per worker	Growth rate of productivity
First 1% increase in physical capital per worker	0.55% increase in real GDP per worker
Second 1% increase in physical capital per worker	0.40% increase in real GDP per worker
Third 1% increase in physical capital per worker	0.35% increase in real GDP per worker

9. (Table: Hypothetical Relationship) The accompanying table represents a hypothetical relationship between physical capital per worker and the growth rate of productivity. This table indicates that the economy is experiencing:
  - A) constant total productivity.
  - B) diminishing returns to physical capital per worker.
  - C) decreasing total productivity.
  - D) increasing returns to physical capital per worker.

Use the following to answer question 10:

**Figure: Crowding Out**



10. (Figure: Crowding Out) If the supply of loanable funds curve shifts to the right, then it will result in:
- A) a decrease in the total amount of borrowing and the interest rate.
  - B) an increase in the total amount of borrowing and a fall in the interest rate.
  - C) a decrease in the total amount of borrowing and an increase in the interest rate.
  - D) an increase in the total amount of borrowing and the interest rate.
11. The process of bringing down inflation that has been embedded into expectations is called:
- A) natural rate of inflation.
  - B) hyperinflation.
  - C) disinflation.
  - D) deflation.
12. When a bond becomes more attractive as an asset due to a rise in the interest rate:
- A) people will stop buying bonds and buy other assets.
  - B) the future price of bonds will fall.
  - C) the price of stock, a substitute asset, will rise.
  - D) the price of stock, a substitute asset, will fall.

13. Increases in the average level of prices is:
- A) inflation.
  - B) depreciation.
  - C) expectations.
  - D) deflation.

Use the following to answer questions 14-15:

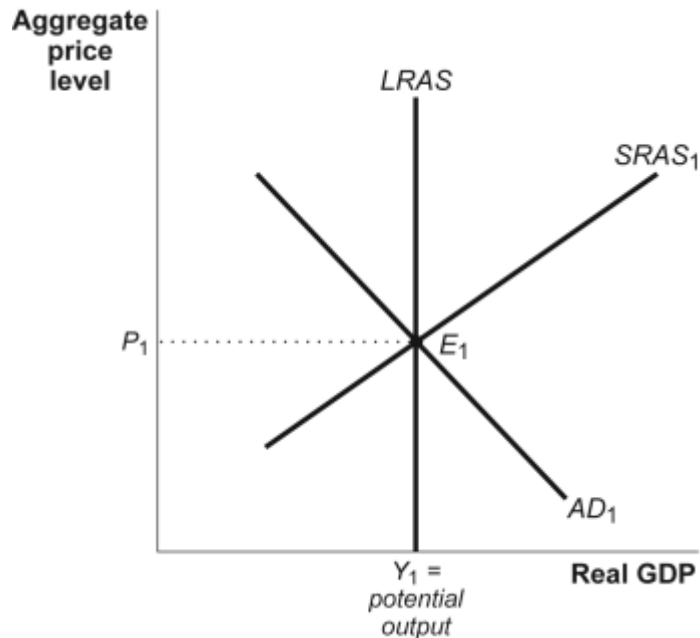
**Figure: Circular Flow Model**



14. (Figure: Circular Flow Model) If the circular flow model is in equilibrium (the sum of money flows into each box is equal to the sum of the money flows out of that box), which of the following is likely to happen if there is a decrease in imports?
- A) an increase in the unemployment rate
  - B) an increase in the nominal GDP
  - C) an increase in the nominal GDP, a decrease in the nominal GDP, and an increase in the unemployment rate
  - D) a decrease in the nominal GDP
15. (Figure: Circular Flow Model) If the circular flow model is in equilibrium (the sum of money flows into each box is equal to the sum of the money flows out of that box), which of the following is likely to happen if there is a decrease in exports?
- A) an increase in the inflation rate
  - B) a decrease in the unemployment rate
  - C) a decrease in the nominal GDP
  - D) an increase in the real GDP

Use the following to answer question 16:

**Figure: AD–AS Model II**



16. (Figure: AD–AS Model II) When consumers and firms become more optimistic, which of the following will take place in the short run?
- A) None of the answer choices provided will occur.
  - B) AD curve will shift to the right.
  - C) SRAS curve will shift to the left.
  - D) SRAS curve will shift to the right.
17. If unplanned inventory investment is positive, this most likely means:
- A) the economy is doing the same since inventory changes have no impact on the economy.
  - B) the stock of inventories is declining.
  - C) aggregate expenditures on goods and services is less than forecasted.
  - D) the economy is growing rapidly.
18. In the short run, an increase in the money supply:
- A) does not affect the interest rate but increases the interest rate in the long run.
  - B) lowers the interest rate but does not affect the interest rate in the long run.
  - C) does not affect the interest rate but decreases the interest rate in the long run.
  - D) increases the interest rate but lowers the interest rate in the long run.

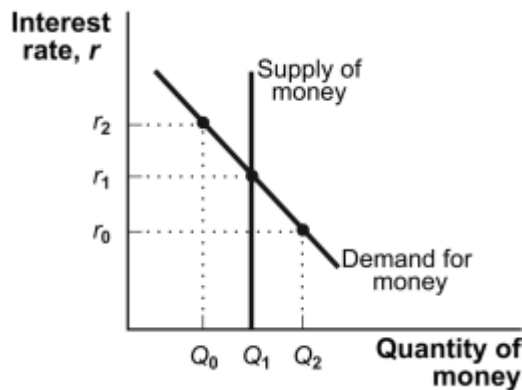
19. Expecting the inflation rate to be 3%, Adrianna decides to put her savings in bonds yielding a fixed 5% interest rate over a year. If the actual inflation rate is \_\_\_\_\_, it can be argued that \_\_\_\_\_ is (are) better off.
- A) below 3%; the corporation issuing the bonds
  - B) below 3%; Adrianna
  - C) exactly 5%; both the corporation issuing the bonds and Adrianna
  - D) above 3%; Adrianna
20. In the long run, an increase in the quantity of money:
- A) increases real interest rates.
  - B) increases real output.
  - C) has no impact on the economy.
  - D) increases prices but not long-run output.
21. The “flight to safety” in March 2008 was:
- A) the Japanese reliance on cash rather than credit cards to avoid the dangers of identity theft.
  - B) the rescue of reporters held hostage in Iran by the Israeli air force.
  - C) investors purchasing Treasury bills and driving their interest rates down because they feared the safety of other assets.
  - D) investors selling Treasury bills and driving their interest rates up because they feared that Treasury bills were too risky.
22. The term “Human capital” describes:
- A) improvement in the worker made possible by education, training and knowledge.
  - B) improvement in the robotics technology that can substitute a human worker.
  - C) improvement in the technology available to the work force.
  - D) improvement made possible by better machines and equipments available.
23. Economists refer to the revenue generated by the government's right to print money as:
- A) reserve policy.
  - B) seigniorage.
  - C) monetary policy.
  - D) fiscal policy.



24. A loan is:
- A) a physical asset that is traded in financial markets.
  - B) a liability for the borrower and an asset for the lender.
  - C) a liability for the lender and an asset for the borrower.
  - D) a claim on a bank that obliges the bank to provide funds to a lender.

Use the following to answer question 25:

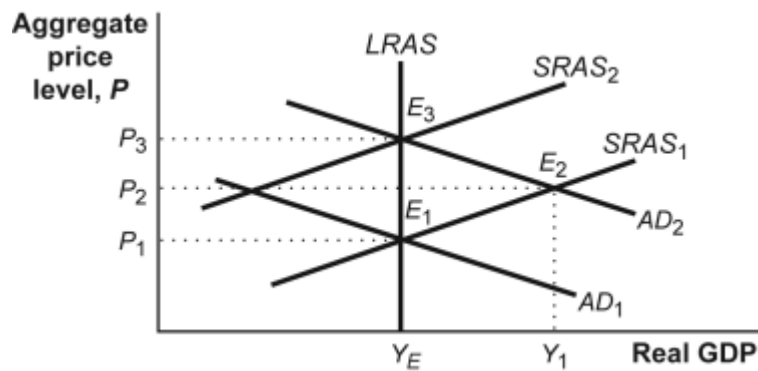
**Figure: Money Market II**



25. (Figure: Money Market II) If the interest rate is above the equilibrium rate, there will be an \_\_\_\_\_ money and the interest rate will \_\_\_\_\_.  
A) excess demand for; fall  
B) excess demand for; rise  
C) excess supply of; rise  
D) excess supply of; fall
26. The higher the short term interest rate:  
A) the more quantity demanded of money the public will be willing to hold.  
B) the lower the opportunity cost of holding money.  
C) the higher the long-term interest rate.  
D) the higher the opportunity cost of holding money.
27. Consumer spending will rise if:  
A) taxes increase or if government transfers fall.  
B) government transfers fall.  
C) government transfers rise.  
D) taxes increase.

Use the following to answer question 28:

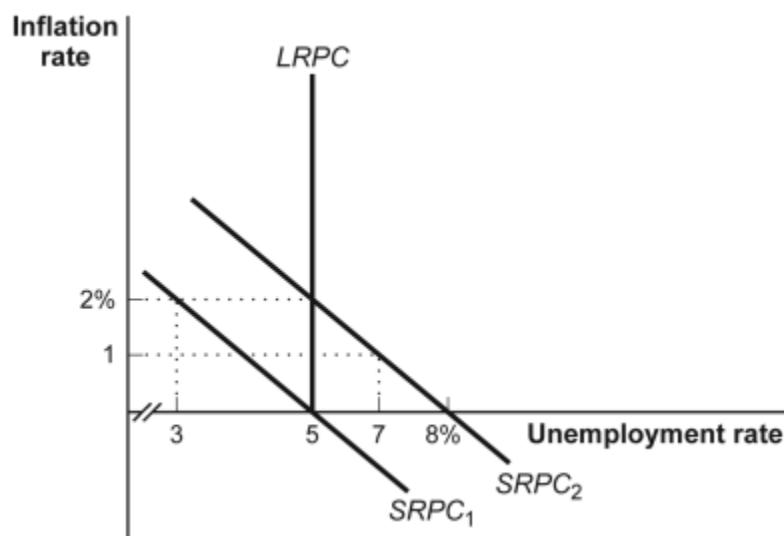
**Figure: Classical Model of the Price Level**



28. (Figure: Classical Model of the Price Level) If the central bank increases the money supply such that aggregate demand shifts from  $AD_1$  to  $AD_2$ , then, according to this classical model, the  $SRAS$  would:
- A) decrease from  $SRAS_1$  to  $SRAS_2$ .
  - B) increase from  $SRAS_2$  to  $SRAS_1$ .
  - C) increase from  $SRAS_1$  to  $SRAS_2$ .
  - D) not change.

Use the following to answer question 29:

**Figure: Short-Run Phillips Curve**

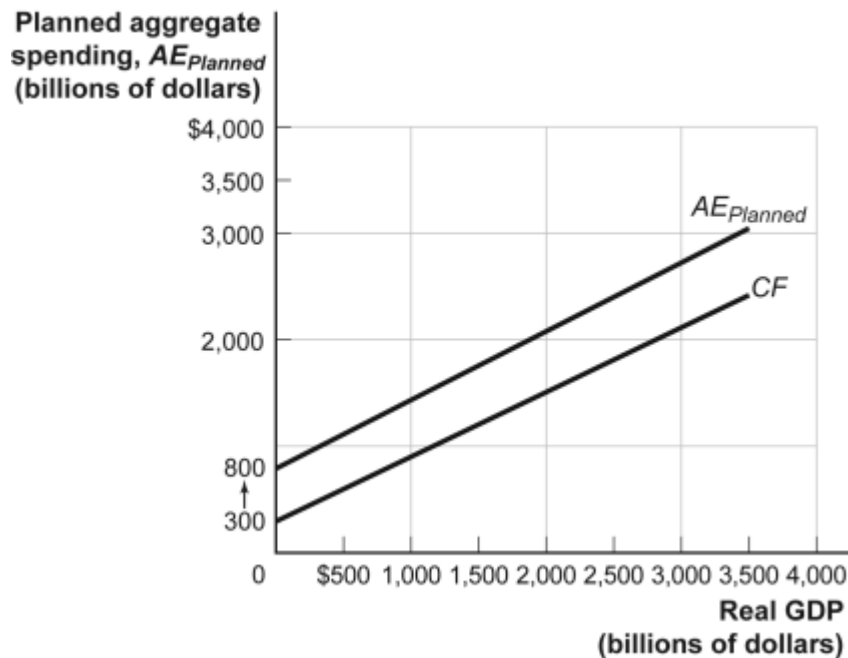


29. (Figure: Short-Run Phillips Curve) The nonaccelerating-inflation rate of unemployment (NAIRU) is:
- A) 7%.
  - B) 3%.
  - C) 8%.
  - D) 5%.
30. A decrease in the demand for money would result from:
- A) an increase in nominal GDP.
  - B) an increase in income.
  - C) an increase in real GDP.
  - D) a decrease in the price level.
31. Suppose that the aggregate output level is lower than potential output. Which of the following is NOT true?
- A) The short-run aggregate supply curve will gradually shift to the left.
  - B) Nominal wages will fall over time.
  - C) Workers are abundant.
  - D) Jobs are scarce.
32. To expand the money supply, the Federal Reserve would have to do which of the following?
- A) get approval from Congress.
  - B) raise interest rates
  - C) engage in an open purchase of Treasury bills
  - D) engage in an open sale of Treasury bills
33. U.S. Treasury bills are a(n):
- A) liability to both the U.S. government and the Federal Reserve.
  - B) part of the net worth of the U.S. government.
  - C) liability of the U.S. government, but an asset to the Federal Reserve.
  - D) asset of the U.S. government, but a liability to the Federal Reserve.
34. If the FOMC conducts an open market purchase, one can expect:
- A) the money supply to decrease.
  - B) interest rates in the money market to fall.
  - C) interest rates in the money market to remain unchanged.
  - D) interest rates in the money market to rise.

35. Money is:
- A) only currency in circulation.
  - B) only currency which is designated by law.
  - C) any form of wealth.
  - D) an asset that can be easily used to purchase goods and services.
36. An economic recovery is all of the following except:
- A) a short-run increase in aggregate production in an economy.
  - B) the end of the business cycle.
  - C) economic growth of a sustained nature.
  - D) a time of increasing employment.

Use the following to answer question 37:

**Figure: The Aggregate Consumption Function and Planned Aggregate Spending**



37. (Figure: The Aggregate Consumption Function and Planned Aggregate Spending) If aggregate wealth increases in this economy, then:
- A)  $AE$  will shift down.
  - B) economy will move downward along the  $AE$ .
  - C)  $AE$  will shift up.
  - D) economy will move upward along the  $AE$ .

38. If potential output growth is greater than actual output growth, then the:
- A) unemployment rate will rise.
  - B) inflation rate will rise.
  - C) unemployment rate will remain constant.
  - D) unemployment rate will fall.
39. In economies that are experiencing persistently high inflation, an increase in the money supply:
- A) will translate into a proportional increase in the aggregate output much quicker than usual.
  - B) will translate into a proportional increase in the aggregate price level much quicker than usual.
  - C) will translate into a proportional increase in the aggregate price level only in the long run.
  - D) will not affect either the aggregate price level or the aggregate output.
40. In the short run, when the *AD* curve increases:
- A) the aggregate price level will rise and the aggregate output level will increase.
  - B) the aggregate price level will fall and the aggregate output level will increase.
  - C) the aggregate price level will fall and the aggregate output level will decrease.
  - D) the aggregate price level will rise and the aggregate output level will fall.

The next questions are from your homework. Answer in the space provided. Please give short answers and use complete sentences. If you do not explain your answer it will be marked wrong, even if you write down a correct number.

1. The accompanying scatter diagram shows the relationship between the unemployment rate and the output gap in the United States from 1990 to 2004. Draw a straight line through the scatter of dots in the figure. Assume that this line represents Okun's law:

$$\text{Unemployment rate} = b - (m \times \text{Output gap})$$

where  $b$  is the vertical intercept and  $-m$  is the slope.



- a. What is the unemployment rate when aggregate output equals potential output? **(1 pt)**
- b. What would the unemployment rate be if the output gap was 2%? **(1 pt)**
- c. What if the output gap was -3%? **(1 pt)**
- d. What do these results tell us about the coefficient  $m$  in Okun's law? **(2 pts)**



3. In 1798, Thomas Malthus's *Essay on the Principle of Population* was published. In it, he wrote: "Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. . . . This implies a strong and constantly operating check on population from the difficulty of subsistence." Malthus was saying that the growth of the population is limited by the amount of food available to eat; people will live at the subsistence level forever. Why didn't Malthus's description apply to the world after 1800? **(5 pts)**
4. During the Great Depression, business people in the United States were very pessimistic about the future of economic growth and reluctant to increase investment spending even when interest rates fell. How did this limit the potential for monetary policy to help alleviate the Depression? **(5 pts)**



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6. How will the following events affect the demand for money? In each case, specify whether there is a shift of the demand curve or a movement along the demand curve and its direction.
- a. There is a fall in the interest rate from 12% to 10%. **(1 pt)**
  
  
  
  
  
  
  
  
  
  
  - b. Thanksgiving arrives and, with it, the beginning of the holiday shopping season. **(1 pt)**
  
  
  
  
  
  
  
  
  
  
  - c. McDonald's and other fast-food restaurants begin to accept credit cards. **(1 pt)**
  
  
  
  
  
  
  
  
  
  
  - d. The Fed engages in an open-market purchase of U.S. Treasury bills. **(2 pts)**

e. **Answer Key**

1. C
2. A
3. B
4. B
5. C
6. A
7. C
8. C
9. B
10. B
11. C
12. D
13. A
14. B
15. C
16. B
17. C
18. B
19. B
20. D
21. C
22. A
23. B
24. B
25. D
26. D
27. C
28. A
29. D
30. D
31. A
32. C
33. C
34. B
35. D
36. B
37. C
38. A
39. B
40. A