Boğaziçi University, Department of Economics  
Spring 2016  
EC 102 PRINCIPLES of MACROECONOMICS  
MIDTERM II  
03.05.2016, Tuesday 11:00  
Section 06  

**TYPE A**

• Do not forget to write your full name, student number and section on the top.

• Turn off your cell phone and put it away. During the exam if you are seen with a cell phone, on or off, your exam will be taken away instantly.

• Put away all your lecture notes, books, etc.

• There are 60 multiple choice questions and 8 pages in the exam. Make sure you have them all.

• Please put all your answers in your answer key. Do not forget to put your exam type on your answer key.

• You have 90 minutes. GOOD LUCK!!

1. Last year real GDP in the imaginary nation of Populia was 907.5 billion and the population was 3.3 million. The year before real GDP was 750 billion and the population was 3 million. What was the growth rate of real GDP per person during the year?

   (a) 10 percent  
   (b) 14 percent  
   (c) 17 percent  
   (d) 21 percent

   **ANSWER:** a - Moderate

2. In 2010, the imaginary nation of Mainland had a population of 6,000 and real GDP of 120,000. In 2011 the population was 6,200 and real GDP of 128,960. Over the year in question, real GDP per person in Mainland grew by

   (a) -4 percent  
   (b) -2 percent  
   (c) 2 percent  
   (d) 4 percent

   **ANSWER:** d - Challenging

3. In 2012, the imaginary nation of Dorados had a population of 8,000 and real GDP of 3,000,000. During the year its real GDP grew by about 2.9%. Which of the following sets of growth rates is consistent with this growth in real GDP?

   (a) 2% population growth and 6% real GDP growth  
   (b) 6% population growth and 2% real GDP growth  
   (c) 4% population growth and 7% real GDP growth  
   (d) 7% population growth and 4% real GDP growth

   **ANSWER:** c - Challenging

4. Given that a country’s real output has increased, in which of the following cases can we be sure that its productivity also has increased?

   (a) The total number of hours worked rose.  
   (b) The total number of hours worked stayed the same.  
   (c) The total number of hours worked fell.  
   (d) Both b and c are correct.

   **ANSWER:** d - Moderate
5. Greg’s Ice Cream produces 1120 gallons of ice cream per day. Each employed works seven hours and has productivity of 20 gallons an hour. How many employees does Greg’s Ice Cream employ?

(a) 160
(b) 56
(c) 8
(d) None of the above is correct.

ANSWER: c - Moderate

6. Dilbert’s Incorporated produced 5,000,000 units of accounting software in 2010. At the start of 2011 the pointy haired boss reduced total annual hours of employment from 10,000 to 8,000 and production was 4,800,000. These numbers indicate that productivity

(a) fell by 4%.
(b) fell by 20%.
(c) rose by 12%.
(d) rose by 20%.

ANSWER: d - Moderate

7. Which of the following are human capital and physical capital, respectively?

(a) for a brick layer: her bricks and her tools
(b) for a gas station: the pumps and the cash register
(c) for a restaurant: the chefs’ knowledge about preparing food and the equipment in the kitchen
(d) for a medical office: the building and the doctors’ knowledge of medicine

ANSWER: c - Easy

8. If an economy with constant returns to scale were to double its physical capital stock, its available natural resources, and its human capital, but leave the size of the labor force the same,

(a) its output would stay the same and so would its productivity.
(b) its output and productivity would increase, but less than double.
(c) its output and productivity would increase by more than double.
(d) None of the above is correct.

ANSWER: b - Challenging

9. Country A and country B are the same except country A currently has more capital. Assuming diminishing returns, if both countries increase their capital by 100 units and other factors that determine output are unchanged, then

(a) output in country A increases by more than in country B.
(b) output in country A increases by the same amount as in country B.
(c) output in country A increases by less than in country B.
(d) None of the above is necessarily correct.

ANSWER: c - Moderate

10. All else equal, if there are diminishing returns, then what happens to productivity if both capital and labor increase?

(a) Productivity will definitely fall.
(b) Productivity will definitely be unchanged.
(c) Productivity will definitely rise.
(d) None of the above are necessarily correct.

ANSWER: d - Challenging

11. Suppose that there are diminishing returns to capital. Suppose also that two countries are the same except one has less capital and so less real GDP per person. Suppose that both increase their saving rate from 3 percent to 4 percent. In the long run

(a) both countries will have permanently higher growth rates of real GDP per person, and the growth rate will be higher in the country with more capital.
(b) both countries will have permanently higher growth rates of real GDP per person, and the growth rate will be higher in the country with less capital.
(c) both countries will have higher levels of real GDP per person, and the temporary increase in growth in the level of real GDP per person will have been greater in the country with more capital.
(d) both countries will have higher levels of real GDP per person, and the temporary increase in growth in the level of real GDP per person will have been greater in the country with less capital.

ANSWER: d - Challenging

12. In a closed economy, what does (T - G) represent?

(a) national saving
(b) investment
(c) private saving
(d) public saving

ANSWER: d - Easy

13. When public saving falls by $2b and private saving falls by $1b in a closed economy,
(a) investment falls by $1b.
(b) investment falls by $3b.
(c) investment increases by $1b.
(d) investment falls by $2b.

ANSWER: b - Moderate

14. For a closed economy, GDP is $18 trillion, consumption is $13 trillion, taxes are $2 trillion and the government runs a deficit of $1 trillion. What are private saving and national saving?
(a) $3 trillion and $1 trillion, respectively
(b) $3 trillion and $2 trillion, respectively
(c) $2 trillion and $3 trillion, respectively
(d) $2 trillion and $2 trillion, respectively

ANSWER: b - Challenging

15. An increase in the government’s budget deficit means
(a) public saving is greater than $0 and increasing.
(b) public saving is greater than $0 and decreasing.
(c) public saving is less than $0 and increasing.
(d) public saving is less than $0 and decreasing.

ANSWER: d - Moderate

16. In a closed economy, if Y and T remained the same, but G rose and C fell but by less than the rise in G, what would happen to private and national saving?
(a) private and national saving would rise
(b) private and national saving would fall
(c) private saving would rise and national saving would fall
(d) private saving would fall and national saving would rise

ANSWER: c - Challenging

17. If there is a surplus of loanable funds, then
(a) the quantity of loanable funds demanded is greater than the quantity of loanable funds supplied and the interest rate is above equilibrium.
(b) the quantity of loanable funds demanded is greater than the quantity of loanable funds supplied and the interest rate is below equilibrium.
(c) the quantity of loanable funds supplied is greater than the quantity of loanable funds demanded and the interest rate is above equilibrium.
(d) the quantity of loanable funds supplied is greater than the quantity of loanable funds demanded and the interest rate is below equilibrium.

ANSWER: c - Moderate

18. What would happen in the market for loanable funds if the government were to decrease the tax rate on interest income?
(a) The supply of loanable funds would shift rightward and investment would increase.
(b) The supply of loanable funds would shift leftward and investment would decrease.
(c) The demand for loanable funds would shift rightward and investment would increase.
(d) The demand for loanable funds would shift leftward and investment would decrease.

ANSWER: a - Moderate

19. Esmerelda worked part-time for her mother’s business without pay. Tabitha was absent from work because she had strep throat. Who is counted as employed?
(a) Esmerelda but not Tabitha
(b) Tabitha but not Esmerelda
(c) both Esmerelda and Tabitha
(d) neither Esmerelda nor Tabitha

ANSWER: c - Moderate

20. Who of the following is counted as unemployed?
(a) someone working without pay for a family member’s business
(b) someone who is absent from their job due to illness
(c) someone on temporary layoff
(d) All of the above are correct.

ANSWER: c - Moderate
21. Anna recently graduated from college with a degree in electrical engineering, but she has not yet started working. To be counted as unemployed she
(a) does not have to have looked for work.
(b) must have looked for work no more than a week ago.
(c) must have looked for work no more than four weeks ago.
(d) must have looked for work no more than twelve weeks ago.

ANSWER: c - Moderate

22. Who would be included in the labor force?
(a) Maggie, who plans to work at the newspaper next year when she turns 16 years old.
(b) Lisa, who is unhappy with her current job.
(c) Bart, who is a full-time student and uninterested in finding employment.
(d) None of the above is correct.

ANSWER: b - Moderate

23. The adult population in the town of Shelbyville is 150 thousand. If 100 thousand people are employed and 20 thousand are unemployed, then the labor force participation rate is approximately
(a) 67%.
(b) 80%.
(c) 16%.
(d) 13%.

ANSWER: b - Moderate

24. Suppose that some country had an adult population of about 46 million, a labor-force participation rate of 75 percent, and an unemployment rate of 8 percent. How many people were employed?
(a) 2.76 million
(b) 31.74 million
(c) 34.5 million
(d) 42.32 million

ANSWER: b - Challenging

25. Some people who are employed or who are not making serious effort to find employment will report themselves as unemployed. Some people who want to find work will be counted as out of the labor force.
(a) Both the first and the second fact tend to make the reported unemployment rate lower than otherwise.
(b) Both the first and the second fact tend to make the reported unemployment rate higher than otherwise.
(c) The first fact tends to make the reported unemployment rate higher than otherwise, while the second fact tends to make the reported unemployment rate lower than otherwise.
(d) The first fact tends to make the reported unemployment rate lower than otherwise, while the second fact tends to make the reported unemployment rate higher than otherwise.

ANSWER: c - Challenging

26. Meredith is looking for work as a computer programmer. Although her prospects are good, she has not yet taken a job. Julie is looking for work in a steel mill. Every time she shows up for an interview, there are more people looking for work than there are openings. Someone waiting in line with her tells her it has been that way for a long time.
(a) Meredith and Julie are both frictionally unemployed.
(b) Meredith and Julie are both structurally unemployed.
(c) Meredith is frictionally unemployed, and Julie is structurally unemployed.
(d) Meredith is structurally unemployed, and Julie is frictionally unemployed.

ANSWER: c - Moderate

27. Which of the following is not an explanation for the existence of structural unemployment?
(a) efficiency wages
(b) job search
(c) minimum-wage laws
(d) unions

ANSWER: b - Moderate

28. Money
(a) is a perfect store of value.
(b) is the most liquid asset.
(c) has intrinsic value, regardless of which form it takes.
(d) All of the above are correct.
29. When prisoners use cigarettes or some other good as money, cigarettes become
   (a) commodity money, but do not function as a unit of account.
   (b) commodity money and function as a unit of account.
   (c) fiat money, but do not function as a unit of account.
   (d) fiat money and function as a unit of account.

ANSWER: b - Easy

30. The manager of the bank where you work tells you that your bank has $10 million in excess reserves. She also tells you that the bank has $400 million in deposits and $375 million dollars in loans. Given this information you find that the reserve requirement must be
   (a) 10/400.
   (b) 25/400.
   (c) 35/400.
   (d) 15/400.

ANSWER: d - Challenging

31. If the reserve ratio is 6 percent, then $9,000 of additional reserves can create up to
   (a) $159,000 of new money.
   (b) $54,000 of new money.
   (c) $150,000 of new money.
   (d) $141,000 of new money.

ANSWER: c - Easy

32. If the money multiplier is 3 and the Central Bank wants to increase the money supply by $900,000, it could
   (a) buy $300,000 worth of bonds.
   (b) buy $225,000 worth of bonds.
   (c) sell $300,000 worth of bonds.
   (d) sell $225,000 worth of bonds.

ANSWER: a - Moderate

33. Other things the same if reserve requirements are decreased, the reserve ratio
   (a) decreases, the money multiplier increases, and the money supply decreases.
   (b) increases, the money multiplier increases, and the money supply increases.
   (c) decreases, the money multiplier increases, and the money supply increases.
   (d) increases, the money multiplier increases, and the money supply decreases.

ANSWER: c - Challenging

34. If the reserve requirement is 10 percent, which of the following pairs of changes would both allow a bank to lend out an additional $10,000?
   (a) the Central Bank buys a $10,000 bond from the bank or someone deposits $10,000 in the bank
   (b) the Central Bank buys a $10,000 bond from the bank or the Central Bank lends the bank $10,000
   (c) the Central Bank sells a $10,000 bond to the bank or someone deposits $10,000 in the bank
   (d) the Central Bank sells a $10,000 bond to the bank or the Central Bank lends the bank $10,000

ANSWER: b - Moderate

35. The banking system currently has $200 billion of reserves, none of which are excess. People hold only deposits and no currency, and the reserve requirement is 4 percent. If the Central Bank raises the reserve requirement to 10 percent and at the same time buys $50 billion worth of bonds, then by how much does the money supply change?
   (a) It rises by $600 billion.
   (b) It rises by $125 billion.
   (c) It falls by $2,500 billion.
   (d) None of the above is correct.

ANSWER: c - Challenging

36. When the money market is drawn with the value of money on the vertical axis, if the price level is above the equilibrium level, there is an
   (a) excess demand for money, so the price level will rise.
   (b) excess demand for money, so the price level will fall.
   (c) excess supply of money, so the price level will rise.
   (d) excess supply of money, so the price level will fall.

ANSWER: b - Challenging

37. Open-market purchases by the Central Bank
   (a) make the price level and value of money fall.
   (b) make the price level rise, and make the value of money fall.
(c) make the price level and make the value of money rise.
(d) make the price level fall, and make the value of money rise.

ANSWER: b - Moderate

38. When the money market is drawn with the value of money on the vertical axis, the price level decreases if
(a) either money demand or money supply shifts right.
(b) either money demand or money supply shifts left.
(c) money demand shifts right or money supply shifts left.
(d) money demand shifts left or money supply shifts right.

ANSWER: c - Moderate

39. According to the classical dichotomy, when the money supply doubles which of the following doubles?
(a) the price level and nominal GDP
(b) the price level and real GDP
(c) only real GDP
(d) only the price level

ANSWER: a - Easy

40. If monetary neutrality holds, then an increase in the money supply
(a) increases real but not nominal variables. Most economists think that monetary neutrality is a good description of the short run.
(b) increases real but not nominal variables. Most economists think that monetary neutrality is a good description of the long run.
(c) increases nominal but not real variables. Most economists think that monetary neutrality is a good description of the short run.
(d) increases nominal but not real variables. Most economists think that monetary neutrality is a good description of the long run.

ANSWER: d - Moderate

41. If velocity is 5, the price level is 2, and the real value of output is 2,500, then the quantity of money is
(a) $250.
(b) $25,000.
(c) $1,000.
(d) $6,250.

ANSWER: c - Moderate

42. According to the quantity equation, the price level would change less than proportionately with a rise in the money supply if there were also
(a) either a rise in output or a rise in the rate at which money changes hands.
(b) either a rise in output or a fall in the rate at which money changes hands.
(c) either a fall in output or a rise in the rate at which money changes hands.
(d) either a fall in output or a fall in the rate at which money changes hands.

ANSWER: b - Challenging

43. Suppose over some period of time the money supply tripled, velocity was unchanged, and real GDP doubled. According to the quantity equation the price level is now
(a) 6 times its old value.
(b) 3 times its old value.
(c) 1.5 times its old value.
(d) 0.75 times its old value

ANSWER: c - Moderate

44. According to monetary neutrality and the Fisher effect, an increase in the money supply growth rate eventually increases
(a) inflation and nominal interest rates, but does not change real interest rates.
(b) inflation, nominal interest rates, and real interest rates.
(c) inflation and real interest rates, but does not change nominal interest rates.
(d) nominal interest rates and real interest rates, but does not change inflation.

ANSWER: a - Moderate

45. Egypt has exports of $500 million and imports of $750 million. Egypt
(a) sells more overseas then it buys from overseas; it has a trade deficit.
(b) sells more overseas then it buys from overseas; it has a trade surplus.
(c) buys more from overseas then it sells overseas; it has a trade deficit.
(d) buys more from overseas then it sells overseas; it has a trade surplus.

ANSWER: c - Moderate

46. If a country had a trade deficit of $10 billion and then its exports rose by $20 billion and its imports rose by $10 billion, its net exports would now be

(a) $0
(b) $10 billion.
(c) -$10 billion.
(d) -$20 billion.

ANSWER: a - Challenging

47. If Chileans buy more U.S. stocks and bonds and U.S. residents buy more Chilean wine, then

(a) both U.S. net exports and U.S. net capital outflows rise.
(b) U.S. net exports rise and U.S. net capital outflows fall.
(c) U.S. net exports fall and U.S. net capital outflows rise.
(d) both U.S. net exports and U.S. net capital outflows fall.

ANSWER: d - Moderate

48. If Spain has a trade deficit, then

(a) foreign countries purchase more Spanish assets than Spain purchases from them. This makes Spanish saving greater than Spanish domestic investment.
(b) foreign countries purchase more Spanish assets than Spain purchases from them. This makes Spanish saving smaller than Spanish domestic investment.
(c) foreign countries purchase fewer Spanish assets than Spain purchases from them. This makes Spanish saving greater than Spanish domestic investment.
(d) foreign countries purchase fewer Spanish assets than Spain purchases from them. This makes Spanish saving greater than Spanish domestic investment.

ANSWER: b - Challenging

49. The country of Wiknam has net capital outflow of $1,000, government purchases of $5,000 and consumption of $20,000. Which of the following is correct?

(a) If its domestic investment is $1,000, its GDP is $26,000.
(b) If its domestic investment is $2,000, its GDP is $28,000.
(c) If its domestic investment is $5,000, its GDP is $29,000.
(d) None of the above are correct.

ANSWER: b - Challenging

50. Other things the same, an increase in the foreign price level

(a) reduces the real exchange rate. This reduction could be offset by a decrease in the domestic price level.
(b) reduces the real exchange rate. This reduction could be offset by an increase in the domestic price level.
(c) increases the real exchange rate. This increase could be offset by a decrease in the domestic price level.
(d) increases the real exchange rate. This increase could be offset by an increase in the domestic price level.

ANSWER: b - Challenging

51. Suppose the real exchange rate is 1.25 kilos of bananas in Guatemala per kilo of bananas in the U.S. If one kilo of bananas in the U.S. costs $.50, and the exchange rate is 10 Guatemalan Quetzals per dollar, what is the price of bananas in Guatemala?

(a) 2.50 Quetzals per kilo
(b) 4.00 Quetzals per kilo
(c) 5.75 Quetzals per kilo
(d) 6.25 Quetzals per kilo

ANSWER: b - Challenging

52. If purchasing-power parity between France and the U.S. holds, but then U.S. prices rise,

(a) the real exchange rate is above its purchasing-power parity value. An increase in the nominal exchange rate can move it back.
(b) the real exchange rate is above its purchasing-power parity value. A decrease in the nominal exchange rate can move it back.
(c) the real exchange rate is below its purchasing-power parity value. An increase in the nominal exchange rate can move it back.
(d) the real exchange rate is below its purchasing-power parity value. A decrease in the nominal exchange rate can move it back.

ANSWER: b - Challenging

53. A country has output of $900 billion, consumption of $600 billion, government expenditures of $150 billion and investment of $120 billion. What is its supply of loanable funds?

(a) $30 billion
(b) $90 billion
(c) $120 billion
(d) $150 billion

ANSWER: d - Moderate

54. If a country has a negative net capital outflow, then

(a) on net it is purchasing assets from abroad. This adds to its demand for domestically generated loanable funds.
(b) on net it is purchasing assets from abroad. This subtracts from its demand for domestically generated loanable funds.
(c) on net other countries are purchasing assets from it. This adds to its demand for domestically generated loanable funds.
(d) on net other countries are purchasing assets from it. This subtracts from its demand for domestically generated loanable funds.

ANSWER: d - Moderate

55. If the supply of loanable funds curve shifts right, then the equilibrium

(a) interest rate and level of net capital outflows rise.
(b) interest rate rises and the equilibrium level of net capital outflow falls.
(c) interest rate falls and the equilibrium level of net capital outflow rises.
(d) interest rate and level of net capital outflows fall.

ANSWER: c - Challenging

56. Suppose the real exchange rate is such that the market for foreign-currency exchange has a surplus. This surplus will lead to

(a) an appreciation of the domestic currency, an increase in the domestic net exports, and so an increase in the quantity of domestic currency demanded in the foreign exchange market.
(b) an appreciation of the domestic currency, a decrease in the domestic net exports, and so a decrease in the quantity of domestic currency demanded in the foreign exchange market.
(c) a depreciation of the domestic currency an increase in the domestic net exports, and so an increase in the quantity of domestic currency demanded in the foreign exchange market.
(d) a depreciation of the domestic currency, a decrease in the domestic net exports, and so a decrease in the quantity of domestic currency demanded in the foreign exchange market.

ANSWER: c - Challenging

57. A U.S. bank wants to buy euros in order to buy German bonds. In the open-economy macroeconomic model of the U.S., this transaction would be part of

(a) the supply of currency in the foreign exchange market, and part of the supply of loanable funds.
(b) the demand for currency in the foreign exchange market, and part of the supply of loanable funds.
(c) the supply of currency in the foreign exchange market, and part of the demand for loanable funds.
(d) the demand for currency in the foreign exchange market, and part of the demand for loanable funds.

ANSWER: c - Challenging

58. If a country’s budget deficit increases, then in the market for foreign currency exchange,

(a) the supply of its currency shifts right, so the exchange rate falls.
(b) the demand for its currency shifts right, so the exchange rate rises.
(c) the supply of its currency shifts left, so the exchange rate rises.
(d) the demand for its currency shifts left, so the exchange rate falls.

ANSWER: c - Moderate

59. If the U.S. government imposes an import quota on beef, U.S. net exports will
(a) increase, the real exchange rate of the dollar will appreciate, and domestic sales of U.S. beef will increase.

(b) increase, the real exchange rate of the dollar will depreciate, and domestic sales of U.S. beef will not change.

(c) not change, the real exchange rate of the dollar will appreciate, and domestic sales of U.S. beef will increase.

(d) not change, the real exchange rate of the dollar will depreciate, and domestic sales of U.S. beef will not change.

ANSWER: c - Challenging

60. When a country experiences capital flight its interest rate
   (a) and net capital outflow rise.
   (b) rises and net capital outflow falls.
   (c) falls and net capital outflow rises.
   (d) interest rate and net capital outflow fall.

ANSWER: a - Moderate