

Middle East Technical University
Faculty of Economics and Administrative Sciences
Department of Economics
Econ 102 – Introduction to Economics II
Ege, Şenses, Tunç

NAME:
DEPARTMENT:

4 May 2011

TYPE B
SECOND MIDTERM EXAMINATION
(Time Allowed: 120 minutes)

PART I. ANSWER ALL OF THE FOLLOWING QUESTIONS. (30 +10+10) = 50 points)

Question A. (30 points) Answer Question A by using SCENARIO A provided below.

SCENARIO A: The Miniland economy is characterized as follows:

Miniland is a small economy, which has a single commercial bank, MiniBank. There are only deposits, loans and required reserves in the balance sheet of Miniland, i.e. there are no excess reserves. There is no cash (currency) drain in Miniland.

Miniland's currency is Miniland liras (ML).

Assume that the price level is constant in Miniland.

Potential output = $Y^* = 2200$

Aggregate expenditure = $AE = 500 + 0.75 Y$, where Y = aggregate output (aggregate income)

Interest rate = $i = 8\% (0.08)$

Investment = $I = 580 - 1000i$

Required Reserves of MiniBank = $RR = 180 \text{ ML}$

Required reserve ratio = $r = 20\% (0.2)$

Money demand = $M_d = 1800 - 10000i$

Balance Sheet of the Central Bank	
Assets	Liabilities
Bonds 280	180 Deposits (RR of Minibank)
	100 Currency in circulation

1. (3 pts) Find the equilibrium levels in both the money market and the goods market (use AE model for the goods market) and show them by graphs.

2. (1 pts) What kind of a gap is the Miniland economy experiencing and how big is the gap?

3. Assume that you are the governor of the Central Bank of Miniland. Suppose that you are asked to bring the economy to potential output (Y^*) and close the output gap by using open market operations (OMO). Now you are faced with the question of how much bonds you should buy or sell.

In deciding on how much bonds you should buy or sell, you think as follows:

SHOW ALL THE CALCULATIONS NEEDED FOR FILLING THE BLANKS, OTHERWISE YOU WILL LOSE POINTS.

- 3.1. (1pt) In order to close the output gap, output (Y) must be _____ (increased / decreased) by _____ ML.
- 3.2. (2 pts) In order to eliminate the output gap calculated in (3.1), investment (I) must be _____ (increased / decreased) by _____ ML.

3.3. (3 pts) At the present interest rate ($i = 8\%$), the present level of $I =$ _____ ML. The change necessary in I calculated in (3.2) will bring the new level of I to _____ ML. This new level of I is only possible if the interest rate (i) becomes _____ %.

3.4. (3 pts) The interest rate (i) calculated in (3.3), which is necessary to bring the I to the desired level, is possible by having the level of the money supply at _____ ML., which is possible by _____ (increasing / decreasing) the money supply by _____ ML. from its present level.

3.5. (3 pts) In order to achieve the change in the money supply calculated in (3.4), the Central Bank must ensure that by the multiplier process, Minibank's deposits _____ (increase / decrease) by _____ ML., required reserves _____ (increase / decrease) by _____ ML. and loans _____ (increase / decrease) by _____ ML.

3.6. (2 pts) Therefore the Central Bank must _____ (buy / sell) _____ ML worth of bonds, in order to bring the economy to potential output (Y^*).

3.7. (3 pts) Show the final balance sheet of the Central Bank after the money creation process is completed.

3.8. (3 pts) Show the initial balance sheet of Minibank and the final balance sheet of Minibank after the money creation process is completed.

3.9. (6 pts) Describe the sequence of events after the (purchase/sale) of bonds by the Central Bank in (3.6) and draw a graph to reflect what happened in the money market of the Miniland economy. (Show the initial and new equilibrium levels.) Describe the sequence of events as what happened in the money market is transmitted to the goods market. Draw a graph (use AE model) to reflect what happened in the goods market of the Moneyland economy. (Show the initial and new equilibrium levels.)

Question B: (10 points) Answer this question by using the following SCENARIO B.

SCENARIO B: Assume that Blueland is at an inflationary gap and the price level and the interest rate are very high. The government wishes to reduce the interest rate, aggregate output and prices. Assume that there is no cash drain in Blueland.

1. (1pt) Draw a graph to illustrate the situation in Blueland. Use AD-AS model.

2. (1 pt) Assume the money demand (M_d) curve is very flat and the investment demand curve is very steep in Blueland. Draw the relevant graphs to illustrate this case.

3. (2 pts) Under these circumstances, what kind of a policy or a policy mix would you recommend to Blueland for its aims of reducing the interest rate, price level and aggregate output (income)? Why?

4. (4 pts) Explain the sequence of events after you implement the policy/policies you recommend in (3) until the interest rate falls. Draw a diagram to show how the goods market comes to equilibrium. (Use AD-AS model.)

5. (1 pt) In addition to what is described in SCENARIO B, if Blueland also has a budget deficit problem, would your answer to the above question change? Why?

6. (1 pt) If the assumption of no cash drain is removed from SCENARIO B, would your answer to question 2 change? Why?

Question C. (10 pts) Why is the aggregate demand curve drawn as downward sloping? Explain by assuming a reduction in prices. Draw diagrams to reflect your explanation.

PART II. MULTIPLE CHOICE (25 x 2 = 50 points)

1. Increase in wages would shift
 - a. short-run supply curves leftward and move the economy along a given aggregate demand curve.
 - b. short-run supply curves rightward and move the economy along a given aggregate demand curve.
 - c. aggregate demand curves leftward and move the economy along a given aggregate supply curve.
 - d. aggregate demand curves rightward and move the economy along a given aggregate supply curve.
2. Which of the following policies shifts the AD curve the farthest leftward?
 - a. A rise in taxes of \$10 billion.
 - b. A cut in taxes of \$10 billion.
 - c. A cut in government purchases of \$10 billion.
 - d. A cut in both government purchases and taxes of \$10 billion.
3. In the long run, the multiplier
 - a. is greater than 1 because of the position and slope of the SAS curve.
 - b. is twice the short-run multiplier.
 - c. is 0.
 - d. depends on the shifts in position of the LAS curve.
4. If a recessionary gap exists, a rapid return to full employment, given sticky wages, is most likely to be achieved through
 - a. a rightward shift in short-run aggregate supply.
 - b. a leftward shift in short-run aggregate supply.
 - c. a rightward shift in aggregate demand.
 - d. a leftward shift in aggregate demand.
5. Stagflation is most likely to be caused by a
 - a. rightward shift in aggregate demand.
 - b. leftward shift in aggregate demand.
 - c. rightward shift in short-run aggregate supply.
 - d. leftward shift in short-run aggregate supply.
6. If an inflationary gap exists, the short run aggregate supply (SRAS) curve will continue to
 - a. shift rightward as long as actual income exceeds potential income.
 - b. shift leftward as long as actual income exceeds potential income.
 - c. shift rightward as long as potential income exceeds actual income.
 - d. shift leftward as long as potential income exceeds actual income.
7. In general, a decline in autonomous expenditure that is NOT induced by a price change results in
 - a. a shift of the AD curve rightward.
 - b. movement upward along the AD curve.
 - c. movement downward along the AD curve.
 - d. a shift of the AD curve leftward.

8. The transactions demand for money is _____ and the speculative demand for money is _____.

- a. positively related to aggregate income; positively related to interest rate
- b. positively related to aggregate income; negatively related to interest rate
- c. negatively related to aggregate income; positively related to interest rate
- d. negatively related to aggregate income; negatively related to interest rate

9. In an open economy, when investment, government spending and exports are autonomous, while consumption and imports are induced, the slope of the aggregate expenditure function, as compared to the slope of the consumption function, will be

- a. steeper.
- b. the same.
- c. less steep.
- d. negative.

10. Suppose $C = 100 + 0.7Y_d$ (the consumption function); $T = 0.1Y$ (the tax function) and $M = 0.1Y$ (the import function). The marginal propensity to spend out of an extra TL of income is

- a. 0.53
- b. 0.8.
- c. 0.73.
- d. 0.63.

11. If an economy is at potential Y initially, an increase in the money supply, will lead to a/an _____ in aggregate output (aggregate income) and a/an _____ in the price level.

- a. increase; increase
- b. no change; increase
- c. decrease; increase
- d. decrease; decrease

12. The short-run aggregate supply curve slopes upward because

- a. unit costs rise at higher levels of output.
- b. input prices increase at higher levels of output.
- c. unit costs fall at higher levels of output.
- d. input prices decrease at higher levels of output.
- e. aggregate demand increases at higher levels of national income.

13. The steeper the SRAS curve, the

- a. larger will be the price level rise when government purchases rise and the multiplier effect of government purchases on output becomes larger.
- b. smaller will be the price level rise when government purchases rise and the multiplier effect of government purchases on output becomes larger.
- c. larger will be the price level rise when government purchases rise and the multiplier effect of government purchases on output becomes smaller.
- d. smaller will be the price level rise when government purchases rise and the multiplier effect of government purchases on output becomes smaller.

14. Suppose that during the summer holiday, people decide to hold more cash and less demand deposits to facilitate their travel and shopping. This action

- a. will increase the money supply in the economy.
- b. will decrease the money supply in the economy because all the cash will be spent.
- c. will decrease the money supply because banks lose reserves, thereby affecting their ability to create money.
- d. will have no effect on the money supply since demand deposits are another form of cash.
- e. will increase the supply of money in the economy because of the multiplier effect.

15. Which of the following is (are) the implication(s) of an increase in the cash drain to the public?

- a. The banking system cannot create any money following a new deposit.
- b. There is an increase in the amount of new money that can be created following an increase in demand deposits.
- c. The required reserve ratio is reduced.
- d. The banking system's ability to create new money following a new deposit is reduced.
- e. Both (a) and (c).

16. Suppose that the required reserve ratio is 50 percent. Then if banks hold desired excess reserves and total reserves in the economy rise by \$10 million, the money supply will rise by

- a. less than \$20 million.
- b. \$20 million.
- c. more than \$20 million.
- d. \$50 million.

17. Which of the following pairs of events will definitely lead to a decrease in the equilibrium interest rate?

- a. The purchase of government securities by the Central Bank and an increase in the level of aggregate output.
- b. An increase in the discount rate and an increase in the price level.
- c. A decrease in the required reserve ratio and a decrease in the level of aggregate output.
- d. The sale of government securities by the Central Bank and a decrease in the price level.

18. The LRAS curve relates price level to GDP

- a. in the short-run.
- b. when wages are in adjustment, but prices are unstable.
- c. when national income is at less than potential income.
- d. when technology is allowed to change.
- e. after input costs have fully adjusted to eliminate output gaps.

19. A decrease in _____ reduces the quantity of money that people want to hold.

- a. the discount rate
- b. real GDP
- c. the interest rate
- d. the supply of bonds

20. The two links between the goods market and the money market are
- income and the inflation rate.
 - the interest rate and the unemployment rate.
 - income and the interest rate.
 - the inflation rate and the unemployment rate.
21. An increase in the demand for money is likely to
- increase the demand for bonds.
 - lower the rate of interest.
 - increase net investment.
 - none of the above.
22. Which of the sequence of events follows a rise in the discount rate? (where i = interest rate; I = investment; AE = aggregate expenditure; Y = aggregate output (aggregate income)).
- $i \downarrow \rightarrow I \downarrow \rightarrow AE \downarrow \rightarrow Y \downarrow$
 - $i \uparrow \rightarrow I \downarrow \rightarrow AE \downarrow \rightarrow Y \downarrow$
 - $i \downarrow \rightarrow I \uparrow \rightarrow AE \uparrow \rightarrow Y \uparrow$
 - $i \uparrow \rightarrow I \uparrow \rightarrow AE \uparrow \rightarrow Y \uparrow$
23. When a shift in aggregate demand occurs, the effect will be divided between a change in output and a change in the price level. How the effect is divided depends on
- the slope of the SRAS curve.
 - the amount of inflation in the economy.
 - the position of the AE curve.
 - the size of the multiplier.
 - the slope of the AD curve.
24. The severity of the crowding out effect will be reduced if
- the Central Bank increases the money supply at the same time the government increases government spending.
 - the Central Bank decreases the money supply at the same time the government increases government spending.
 - the Central bank does not change the money supply when the government increases government spending.
 - business firms become pessimistic about the future.
25. Price movements
- do not influence the effect of the multiplier.
 - increase the effect of the multiplier.
 - reduce the effect of the multiplier.
 - have an indeterminate effect on the multiplier.