

Name:

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METU

Department of Economics

ECON 102 (1-2)

07 May 2025

QUIZ 2
(Time: 60 minutes)

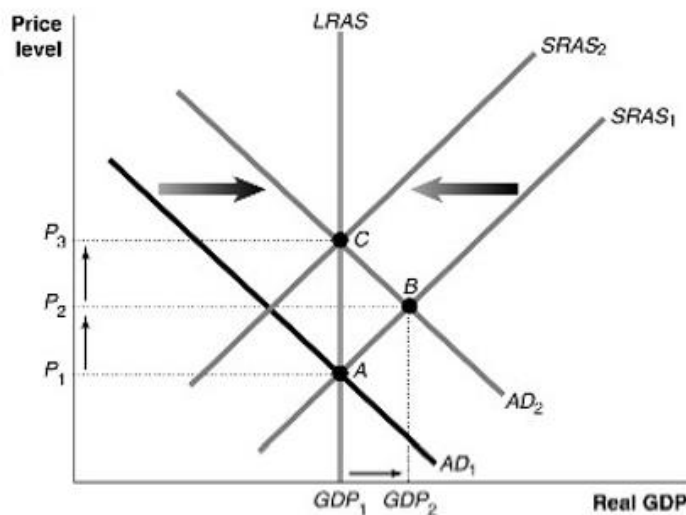
Q.1 (50 Points)

Draw a basic aggregate demand and aggregate supply graph of Türkiye that shows the economy in long-run equilibrium.

a. (25 Points) Assume that there is a large increase in demand for exports of Türkiye. Show the resulting short run equilibrium on your graph. In this short-run equilibrium, is the unemployment rate likely to be higher or lower than it was before the increase in exports? Briefly explain. Explain how the economy adjusts back to long-run equilibrium. When the economy has adjusted back to long-run equilibrium, how have the values of each of the following changed relative to initial equilibrium, before the increase in exports:

- i. Real GDP
- ii. The price level
- iii. The unemployment rate

a.



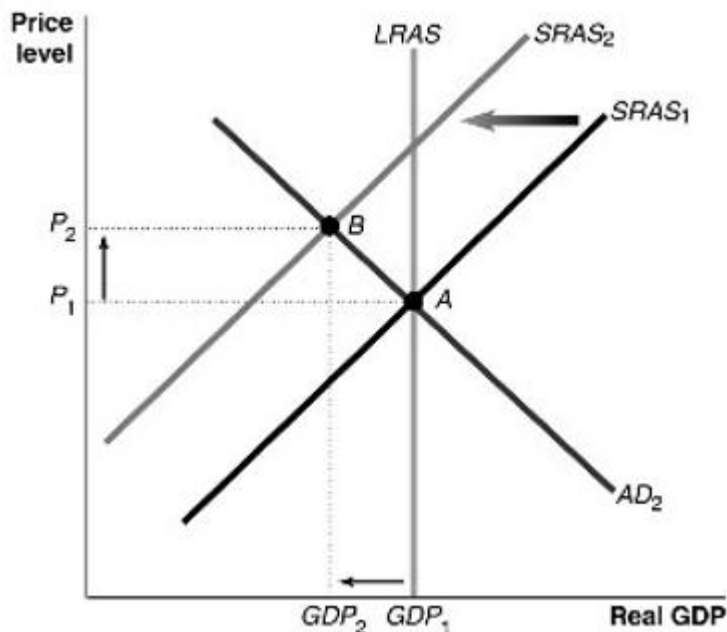
The large increase in the demand for exports of Türkiye shifts the aggregate demand curve to the right, moving short-run equilibrium from point A to point B with a higher price level and real GDP. The unemployment rate is lower because real GDP has increased with no change in potential real GDP. Workers and firms will eventually adjust to the price level being higher than they expected. Workers will push for higher wages, and firms will charge higher prices, causing short-run aggregate supply to shift to the

left. In the long run, the economy will be in equilibrium at point **C** with a higher price level, the same level of real GDP (GDP_1), and the same unemployment rate.

b. (25 Points) Assume that there is an unexpected increase in the price of oil which is an important component in industrial processes and transportation. Show the resulting short run equilibrium on your graph. Explain how the economy adjusts back to long-run equilibrium. In this short-run equilibrium, is the unemployment rate likely to be higher or lower than it was before the unexpected increase in the price of oil? Briefly explain. When the economy has adjusted back to long-run equilibrium, how have the values of each of the following changed relative to initial equilibrium, before the unexpected increase in the price of oil:

- i. Real GDP
- ii. The price level
- iii. The unemployment rate

b.



An unexpected increase in the price of an important raw material causes the short-run aggregate supply to shift to the left. Equilibrium moves from point **A** to point **B**, with a higher price level and lower real GDP. The unemployment rate has increased with real GDP below potential real GDP. The drop in real GDP and the increase in unemployment lead workers to accept lower wages and firms to accept lower prices. The short-run aggregate supply curve shifts from $SRAS_2$ back to $SRAS_1$, and equilibrium moves from point **B** back to point **A**. When the economy has adjusted back to equilibrium at point **A**, real GDP, the price level, and the unemployment rate are back to their original values.

Q.2 (10 Points)

You are going to use the following hypothetical financial information to measure the money supply in a country in 2024.

Bills and coins in circulation: \$615 billion

Bills and coins in vaults of commercial banks: \$37 billion

Demand deposits: \$905 billion

Time deposits: \$4 trillion

Government bonds held by the public: \$218 billion

Government bonds held by the Central Bank: \$251 billion

Amounts owed on credit cards: \$279 billion

Credit limits on credit cards: \$514 billion

Small time deposits: \$2,321 billion

Money market mutual funds: \$2,956 billion

Using this information calculate M1.

M1 = Currency (bills and coins in circulation) + Demand deposits

= \$615 + \$905 = \$1,520 billion

Q.3 (20 Points)

The commercial banks in Euphorialand have the following assets and liabilities.

Total Reserves	\$500 million
Loans	\$2000 million
Deposits	\$3000 million
Total Assets	\$4000 million

- a. (10 Points) Construct the commercial banks' balance sheet. (T-account). If there are any missing assets and liabilities, call them "other assets" and "other liabilities," respectively.

Assets (in million \$)		Liabilities (in million \$)	
Total Reserves	\$500	Deposit	\$3000
Loans	2000	Other Liabilities	1000
Other Assets	1500		
Total Assets	4000	Total Liabilities	4000

- b. (5 Points) Calculate the commercial banks' reserve ratio.

$$\text{Reserve Ratio} = \text{Reserves} / \text{Deposits} = 500 / 3000 = 1/6 \quad \text{RR}=16.666\%$$

- c. (5 Points) If the reserve ratio that you found in part (b) is equal to the required reserve ratio, calculate the money multiplier. Assume that there is no cash drain.

For this case,

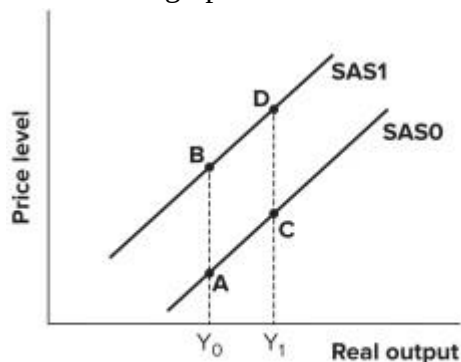
$$\text{Deposit (money) Multiplier} = 1 / r = 1 / (1/6) = 6$$

MULTIPLE CHOICE QUESTIONS (20 Points)

- 1) The reason why the AS/AD model does not depend upon the concepts of substitution and opportunity cost is that:
- A) in groups, people do not make the same choices as when they are alone.
 - B) the AS/AD model considers total output. There are no goods to substitute.**
 - C) the AS/AD model considers the effects of other countries' decisions.
 - D) other things remain constant in the AS/AD model.

- 2) A fall in a foreign country's income will most likely cause:
- A) a reduction in domestic country's exports, so the domestic country aggregate demand curve shifts left.**
 - B) a reduction in domestic country exports, so the domestic country aggregate demand curve shifts right.
 - C) an increase in domestic country exports, so the domestic country aggregate demand curve shifts left.
 - D) an increase in domestic country exports, so the domestic country aggregate demand curve shifts right.

- 3) Refer to the graph shown. A movement from A to C is most likely to be caused by:



- A) an increase in input prices.
 - B) a decrease in input prices.
 - C) an increase in aggregate demand.**
 - D) a decrease in aggregate demand.
- 4) Suppose the economy is in a recessionary gap. In the absence of any policy intervention, the short-run aggregate supply curve will eventually shift:
- A) down (to the right), causing the price level to fall and output to rise.**
 - B) down (to the right), causing the price level to fall and output to fall.
 - C) down (to the right), causing the price level to rise and output to fall.
 - D) up (to the left), causing the price level to fall and output to rise.

- 5) The value and functionality of money are determined by the:
- A) lack of credibility in other financial assets.
 - B) credibility in other financial assets.
 - C) general acceptability to other people.**
 - D) regulations defined by the Fed.
- 6) Why do people often hold money instead of bonds?
- A) Money is less liquid than bonds.
 - B) Money is needed for transactions.**
 - C) Bonds pay interest.
 - D) Of the two, only money is a store of value.
- 7) After the beginning of the 2008 recession, excess reserves in the banking system rose significantly. This increase most likely:
- A) decreased the money supply.**
 - B) did not affect the money supply.
 - C) increased the money supply.
 - D) had an unpredictable effect on the money supply.
- 8) Suppose the banking system has \$100,000 in outstanding deposits and actual reserves of \$35,000. If the required reserve ratio is 20 percent, the maximum amount the banking system can add to the money supply is:
- A) \$15,000.
 - B) \$75,000.**
 - C) \$175,000.
 - D) \$500,000.
- 9) If you expect interest rates to rise, you will want to be holding:
- A) more money because bond prices will likely fall.**
 - B) less money because bond prices will likely rise.
 - C) more money because bond prices will likely rise.
 - D) less money because bond prices will likely fall.
- 10) Present value is a method of:
- A) calculating the interest that will be earned on an asset.
 - B) translating the current value of an asset into its future value.
 - C) translating the future value of an asset into its current value.**
 - D) calculating the principal and interest payments on a loan.