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Economics 152
Solution to Problem Set 5

PART 1 (10 POINTS) :

1. "Discretionary" fiscal policy is so named because it:
A) is undertaken at the option of the nation's central bank.
B) occurs automatically as the nation's level of GDP changes.
C) involves specific changes in T and G undertaken expressly for stabilization purposes at the option of Congress.
D) is invoked secretly by the Council of Economic Advisors.

2. Which of the following represents the most expansionary fiscal policy?
A) a $12 billion tax cut
B) a $12 billion tax increase
C) a $12 billion increase in government spending
D) a $12 billion decrease in government spending

3. Assume the economy is in the midst of a severe recession. Which of the following policies would be consistent with active fiscal policy?
A) a Congressional proposal to incur a Federal surplus to be used for the retirement of public debt
B) a reduction in agricultural subsidies and veterans' benefits
C) a postponement of a highway construction program
D) a reduction in Federal tax rates on personal and corporate income

4. In a certain year the aggregate amount demanded at the existing price level consists of $100 billion of consumption, $40 billion of investment, $10 billion of net exports, and $20 billion of government purchases. Full-employment GDP is $120 billion. To obtain price level stability under these conditions the government should:
A) increase tax rates and reduce government spending.
B) discourage personal saving by reducing the interest rate on government bonds.
C) increase government expenditures.
D) encourage private investment by reducing corporate income taxes.

5. The basic policy-making body in the U.S. banking system is:
A) the Open Market Committee.
B) the Federal Advisory Council.
C) the board of Governors of the Federal Reserve.
D) the Council of Economic Advisors

6. If actual reserves in the banking system are $40,000, excess reserves are $10,000, and demand deposits are $240,000, then the legal reserve requirement is:

A) 10 percent
B) 20 percent
C) 12.5 percent
D) 13.8 percent

7. Which of the following statements is correct?

A) Interest rates and bond prices vary directly.
B) Interest rates and bond prices vary inversely.
C) Interest rates and bond prices are unrelated.
D) Interest rates and bond prices vary directly during inflations and inversely during recessions

Use the following to answer questions 8-9:

Answer the next question(s) on the basis of the following information. It is assumed that households and businesses want to hold for transactions purposes an amount of money equal to one half of nominal GDP. The table shows the amounts of money which households and businesses want to hold as an asset at various interest rates.

Interest rate	**Amount of money demanded**
10%	$20
8	40
6	60
4	80
2	100

8. Refer to the above information. If nominal GDP is $200 and the interest rate is 6 percent, what total amount of money will household and business want to hold?

A) $120 B) $140 C) $160 D) $180

9. Refer to the above information. If nominal GDP is $300 and the supply of money is $230, the equilibrium interest rate will be:

A) 8 percent B) 6 percent C) 4 percent D) 2 percent

10. The price of a bond having no expiration date is originally $8,000 and has a fixed annual interest payment of $800. A fall in the price of the bond by $3,000 will provide a new buyer of the bond an interest rate of:

A) 10 percent B) 12 percent C) 14 percent D) 16 percent

PART 2 (3 POINTS)

Use the figures in the table below to answer the following questions:

	$ Billions
Large time deposits	1,300
Money-market deposit accounts	1,050
Money-market mutual funds	905
Checkable deposits	836
Noncheckable savings deposits	570
Currency	325

1. What is the value of M1?

   Answer: M1 = CU + D

   = $ (325 + 836)

   = $ 1161 bn

2. What is the value of M2?

   Answer: M2 = M1 + MMDA + MMMF + Non-Checkable Savings Deposits

   = $ (1161 + 1050 + 905 + 570)

   = $ 3686 bn

3. What is the value of M3?

   Answer: M3 = M2 + Large Time Deposits

   = $ (3686 + 1300)

   = $ 4986 bn

PART 3 (2 POINTS)

Use the table below to answer the questions:

Interest rate (in %)	**Asset demand (billions)**
14	$200
13	300
12	400
11	500

1. If the transactions demand for money equals 10% of nominal GDP, the nominal GDP is $5,000 billion, and the supply of money is $900 billion, what is the equilibrium interest rate?

Answer: $D_t = \frac{10}{100} * 100$

$D_m = D_t + D_a = S_m$

$= 500 + D_a = 900$ bn

$D_a = \$ (900 - 500)$ bn

$D_a = \$ 400$ bn

Therefore the equilibrium interest rate = 12%.

2. If nominal GDP remains constant, and transactions demand is still 10% of nominal GDP, but the money supply is decreased from $900 to $800 billion, what will the equilibrium rate of interest be?

Answer: $500 + D_a = 800$

$D_a = \$ (800 - 500)$ bn

$D_a = \$ 300$ bn

Therefore the equilibrium interest rate = 13%.

PART 4 (5 POINTS)

Suppose that bank ABC has the following simplified balance sheet. The reserve ratio is 20%

(all figures in thousands)

Assets		Rounds (1)	Rounds (2)	Liabilities		Rounds (1)	Rounds (2)
Reserves	$40	45	45				
Securities	90	90	90	Deposits	$200	205	209
Loans	70	70	74				

Assume that households and businesses deposit $5,000 in this bank and that there is **no lending by bank ABC in the first round.**

In column (1) show the changes in the bank's balance sheet. Is there a change in the money supply?

Answer: No change in the money supply, because no loans have been made out.

In column (2) show what would happen if the bank now loans all of its excess reserves to a depositor. Is there any change in the money supply?

Answer: Yes, the $ 4000 excess reserves increase demand deposit by $ 4000.

Answer Key – ProblemSet5

1. C
2. C
3. D
4. A
5. A
6. C
7. B
8. C
9. C
10. D