ECN 204
Introductory Macroeconomics
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Assignment 5

Part A Multiple-Choice Questions [35 marks]

Each question is worth 1 mark. There is no negative marking for wrong answers

To answer each question correctly, you have to choose the best answer from the given four choices.

1. The major component of the money supply (M1) is:
   A) gold certificates.
   B) demand deposits.
   C) paper money in circulation.
   D) coins.

2. The difference between M1 and M2 is that:
   A) The former includes notice deposits.
   B) The latter includes personal saving deposits and non-personal notice deposits.
   C) The latter includes government bonds.
   D) The latter includes cash held by chartered banks.

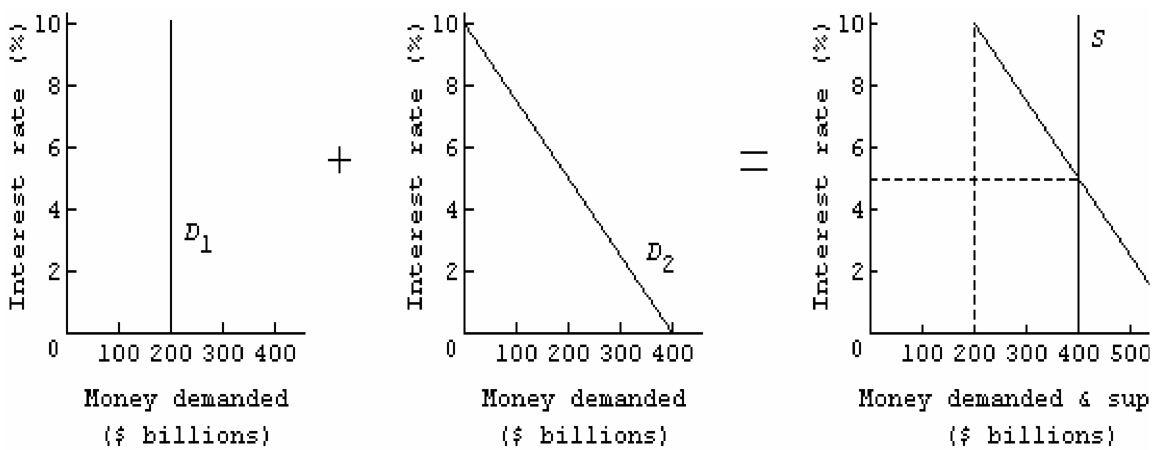
3. The M2+ definition of the money supply includes:
   A) M1 plus the M2.
   B) M2 plus the coins and paper money held by the chartered banks.
   C) M2 plus the deposits at trust and mortgage companies, credit unions, caisses populaires, and governments savings institutions, plus money market mutual funds and life insurance annuities.
   D) M2 plus the government securities held by the chartered banks.

4. The purchasing power of the dollar:
   A) Has been increasing in recent years because of economic growth.
   B) varies directly with the cost-of-living index.
   C) is inversely related to the level of aggregate demand.
   D) is the reciprocal of the price level.

5. On a diagram wherein the interest rate and the quantity of money demanded are shown on the vertical and horizontal axes respectively, the transactions demand for money can be represented by:
   A) a line parallel to the horizontal axis.
   B) a vertical line.
   C) a downsloping line or curve from left to right.
   D) an upsloping line or curve from left to right.

6. The asset demand for money:
   A) is unrelated to both the interest rate and the level of GDP.
   B) varies inversely with the rate of interest.
   C) varies inversely with the level of real GDP.
   D) varies directly with the level of nominal GDP.
   E) varies directly with the rate of interest.

7. Refer to the money market diagram below. The asset demand for money is shown by:



   A) D_1.
   B) D_2.
   C) D_3.
   D) none of the above.

8. The equilibrium rate of interest in the money market is determined by:
   A) The intersection of the supply of money and the asset demand for money.
   B) The intersection of the supply of money and the transactions demand for money.
   C) The intersection of the supply of money and the total demand for money.
   D) none of the above.

9. Refer to the information below. If the money supply is $160, the equilibrium interest rate will be:

   Columns (1)and (2)indicate the transactions demand (D_t)for money and columns (1)and (3)show the asset demand (D_a) for money:

(1) Interest Rate	(2) D_t	(3) D_a
12%	$100	$0
10	100	20
8	100	40
6	100	60
4	100	80
2	100	100

   A) 10 percent.
   B) 8 percent.
   C) 6 percent.
   D) 4 percent.
   E) 2 percent.

10. If the supply of money is reduced, we would expect:
    A) the demand for money to increase.
    B) interest rates to fall
    C) bond prices to fall.
    D) none of the above to occur.

11. The goldsmith's ability to create money was based on the fact that:
    A) withdrawals of gold tended to exceed deposits of gold in any given time period.
    B) consumers and merchants preferred to use gold for transactions, rather than paper money.
    C) the goldsmith was required to keep 100 percent gold reserves.
    D) paper money was rarely redeemed for gold.

12. The reserves of a chartered bank consist of:
    A) the amount of money market funds it holds.
    B) the small deposits at the Bank of Canada and vault cash.
    C) government bonds which the bank holds.
    D) the bank's net worth.

13. Suppose a chartered bank has demand deposits of $100,000 and the desired reserve ratio is 10 percent. If the bank's desired and excess reserves are equal, then its actual reserves:
    A) are $30,000.
    B) are $10,000.
    C) are $20,000.
    D) cannot be determined from the given information.

14. If you deposit a $50 bill in a chartered bank that has a 10 percent desired reserve ratio, the bank will:
    A) have $45 of additional excess reserves.
    B) be capable of lending an additional $500.
    C) be capable of lending an additional $50.
    D) have $50 of desired reserves.
    E) have $50 of additional excess reserves.

Use the following to answer questions 15-16:

The following balance sheet is for the First National Bank. Assume the desired reserve ratio is 15 percent.

Assets		Liabilities and net worth	
Reserves	$50,000	Demand deposits	$120,000
Loans	75,000	Capital stock	130,000
Securities	25,000		
Property	100,000		

15. Refer to the above data. If a cheque for $14,000 is drawn and cleared against this bank, its reserves and demand deposits will be, respectively:
    A) $50,000 and $120,000.
    B) $50,000 and $106,000.
    C) $36,000 and $120,000.
    D) $36,000 and $106,000.

16. Refer to the above data. If a cheque for $20,000 is drawn and cleared against this bank, it will have excess reserves of:
    A) $15,000.
    B) $20,000.
    C) $25,000.
    D) $30,000.

Use the following to answer question 17:

The balance sheet below if for the ABC National Bank. Assume the desired reserve ratio is 20 percent.

Assets		Liabilities and net worth	
Reserves	$ 27,000	Demand deposits	$110,000
Loans	50,000	Capital stock	200,000
Securities	33,000		
Property	200,000		

17. Refer to the above information. This bank can safely expand its loans by a maximum of:
    A) $7,000.
    B) $25,000.
    C) $12,000.
    D) $5,000.

18. Which of the following is correct?
    A) Both the granting and repaying of bank loans expand the aggregate money supply.
    B) Granting and repaying bank loans do not affect the money supply.
    C) Granting a bank loan destroys money; repaying a bank loan creates money.
    D) Granting a bank loan creates money; repaying a bank loan destroys money.

19. Suppose a chartered banking system has $100,000 of outstanding demand deposits and actual reserves of $35,000. If the desired reserve ratio is 20 percent, the banking system can expand the supply of money by the maximum amount of:
    A) $122,000.
    B) $175,000.
    C) $300,000.
    D) $75,000

20. The multiple by which the chartered banking system can expand the supply of money is equal to the reciprocal of:
    A) the MPS.
    B) its actual reserves.
    C) its excess reserves.
    D) the desired reserve ratio.

21. Which of the following is the most important function of the Bank of Canada?
    A) the collection or clearing of cheques among chartered banks
    B) regulating the supply of money
    C) acting as a fiscal agent for the federal government
    D) holding the reserves of chartered banks

22. In the consolidated balance sheet of the Bank of Canada, chartered bank reserves held by the Bank of Canada are:
    A) a liability of the Bank of Canada and chartered banks.
    B) an asset of the Bank of Canada and chartered banks.
    C) a liability of the Bank of Canada and an asset for chartered banks.
    D) an asset of the Bank of Canada and a liability for chartered banks.

23. The three main tools of monetary policy are:
    A) tax rate changes, the bank rate, and government deposit shifting.
    B) tax rate changes, changes in government expenditures,and the bank rate.
    C) open-market operations, switching Government of Canada deposits and the bank rate.
    D) changes in government expenditures,the bank rate, and tax rate changes.

24. "Open-market operations" refers to:
    A) purchases of stocks in the Toronto Stock Exchange.
    B) the purchase or sale of government securities by the Bank of Canada.
    C) central bank lending to chartered banks.
    D) the specifying of margin requirements on stock purchases.

25. If the Bank of Canada buys government securities from the chartered banks, which of the above transactions take place?
    A) The demand deposits of chartered banks are unchanged, but their reserves increase.
    B) The demand deposits and reserves of chartered banks both decrease.
    C) The demand deposits of chartered banks are unchanged, but their reserves decrease.
    D) The demand deposits and reserves of chartered banks are both unchanged.

26. Assume the desired reserve ratio is 25 percent and the Bank of Canada buys $4 million of securities from the public. As a result of this transaction the supply of money is:
    A) not directly affected, but the money-creating potential of the chartered banking system is increased by $12 million.
    B) directly increased by $4 million and the money-creating potential of the chartered banking system is increased by $16 million.
    C) directly reduced by $4 million and the money-creating potential of the chartered banking system is decreased by $12 million.
    D) directly increased by $4 million and the money-creating potential of the chartered banking system is increased by $12 million.

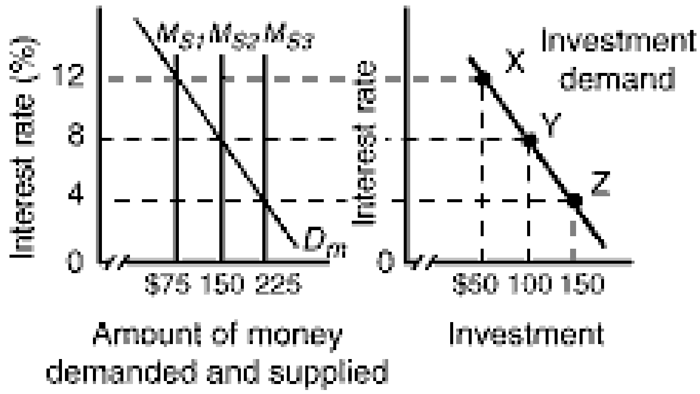
27. The Bank of Canada, by government deposit switching from chartered banks to itself,
    A) immediately increases the deposits and the reserves of the chartered banks.
    B) immediately reduces the deposits and the reserves of the chartered banks.
    C) immediately increases the supply of money.
    D) increases the supply of money eventually.

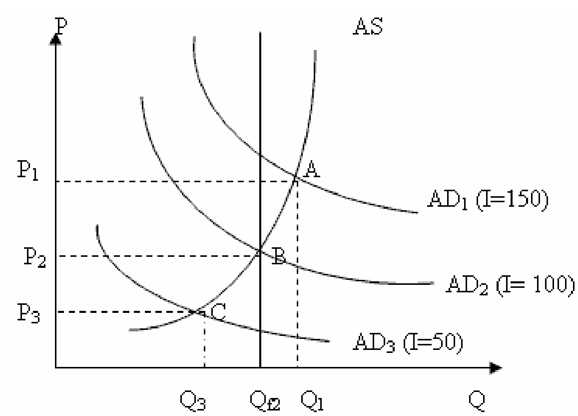
28. The bank rate is the rate of interest at which
    A) chartered banks lend to large corporations.
    B) the Bank of Canada lends to large corporations.
    C) savings and loan associations lend to home builders.
    D) the Bank of Canada lends to chartered banks.

29. When a chartered bank borrows from the Bank of Canada:
    A) the supply of money automatically increases.
    B) it indicates that the chartered bank is unsound financially.
    C) the chartered bank's lending ability is increased.
    D) the chartered bank's reserves are reduced.

30. The overnight lending rate is the rate at which:
    A) The Bank of Canada borrows from investment dealers.
    B) The Bank of Canada borrows from the chartered banks.
    C) the chartered banks, investment dealers, and other financial market participants borrow and lend funds for one day.
    D) The Bank of Canada lends to the Department of Finance.

Use the following to answer questions 31-32:





31. Refer to the above diagrams, in which the numbers in parentheses after the AD_1, AD_2, and AD_3 labels indicate the level of investment spending associated with each curve. All figures are in billions. The economy is at equilibrium at point c on the aggregate demand curve. What policy should the monetary authorities pursue to achieve a noninflationary full-employment level of real GDP?
   A) increase the money supply from $75 to $150 billion
   B) increase the money supply from $150 to $225 billion
   C) decrease the money supply from $225 to $150 billion
   D) make no change in the money supply

32. Refer to the above diagrams, in which the numbers in parentheses after the AD_1, AD_2, and AD_3 labels indicate the level of investment spending associated with each curve. All figures are in billions. The economy is at point Y on the investment demand curve. Given these conditions, what policy should the monetary authorities pursue to achieve a noninflationary full-employment level of real GDP?
    A) increase aggregate demand from AD_3 to AD_2
    B) decrease the money supply from $225 to $150 billion
    C) increase interest rates from 4 to 8 percent
    D) make no change in monetary policy

33. The purpose of an expansionary monetary policy is to shift the:
    A) aggregate expenditures curve downward.
    B) aggregate demand curve rightward.
    C) aggregate supply curve leftward.
    D) investment demand curve leftward.

34. The Bank of Canada
    A) acts as a fiscal agent for the federal government.
    B) supplies the economy with paper currency.
    C) holds the deposits of the chartered banks.
    D) does all of the above.

Use the following to answer question 35:

The following is information about a banking system: new currency deposited in the system = $40 billion; desired reserve ratio = 20%; excess reserves prior to the currency deposit = $0.

35. Refer to the above information. The banking system will be able to expand the money supply through loans by:
    A) $160 billion.
    B) $200 billion.
    C) $40 billion.
    D) $128 billion.

Part B True/ False/ Uncertain Questions [15 marks]

Each question is worth 5 marks.

Explain why the following statement is True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important.

B-1 Lower bond prices are associated with lower interest rates.

B-2 An easy money policy can control demand-pull inflation.

B-3 In an open economy, the net export effect strengthens a tight monetary policy.

Part C   Problem Solving Questions   [40 marks]

Answer all parts of the following questions.

C-1. Below is a simplified consolidated balance sheet of the banking system. [Hint: assume that the banking system is in equilibrium and the public holds all of its money in the bank].

Assets:	**$ B**	**Liabilities:**	**$ B**
Cash	30	Demand Deposits	900
Deposits at Bank of Canada	24		
Government Bonds	46		
Loans Outstanding	800		

(a) Suppose the Bank of Canada sells $5 B worth of government to the banks. Show the initial effect on the consolidated balance sheet of the banking system. What effect does this transaction have on the money supply? [Hint: Write out the changes to the various assets and liabilities before and after the banks make any new, or call-in any old, loans.] [10]

(b) Return to the original balance sheet of the banking system given in the table above and suppose that the Bank of Canada announces a decrease in the bank rate which causes the banking system to reduce its desired reserve ratio to 4%. What effect does this transaction have on the outstanding loans, reserves and money supply? [10]

(c) How would your answer to parts (a) and (b) change if individuals actually hold some of their money in cash? In particular, would the money supply expand or contract by more or less than you found above? [10]