

<b>Student Name</b>	
<b>Student ID</b>	



**INTRODUCTION TO MONEY AND BANKING  
FINAL EXAM  
Montpetit Hall, 125 University**

**PROFESSOR: Lilia Karnizova  
December 12, 2014  
2:00 – 5:00 pm**

1. The exam consists of three parts. Part I is **compulsory** (50 points). Part II requires answering **5 out of 10** questions (10 points each). Part III has **30 multiple choice** questions (2 points each).
2. Answer the multiple choice questions on the Scantron answer sheet. Answer all other questions in the examination booklet.
3. Students are required to indicate their student number on the examination booklet and on the Scantron answer sheet.
4. This is a closed book exam. The use of books, notes, mathematical tables or other study aides is **not** allowed.
5. Students can use calculators. Financial calculators are allowed, but not required in the exam.
6. Students are required to hand in the questions with their answers.
7. Students are required to indicate which questions they answered in part II on the front page.

	<b>Part I (50)</b>	<b>Part II (50)</b>	<b>Part III (60)</b>	<b>TOTAL (160)</b>	<b>Grade in %</b>
<b>Student's grade</b>					

	<b>Q2 (10)</b>	<b>Q3 (10)</b>	<b>Q4 (10)</b>	<b>Q5 (10)</b>	<b>Q6 (10)</b>	<b>Q7 (10)</b>	<b>Q8 (10)</b>	<b>Q9 (10)</b>	<b>Q10 (10)</b>	<b>Q11 (10)</b>	<b>PIII (50)</b>
<b>Answered? Put "X"</b>											
<b>Grade</b>											

**GOOD LUCK!**

**Part I:** Answering this question is **compulsory**.

**Question 1 (50 points)**

Lupcon Bank has the following balance sheet:

<b>Assets</b>		<b>Liabilities</b>	
Reserves	\$60 million	Chequable deposits	\$600 million
Commercial loans	\$165 million	Capital	\$25 million
Residential Mortgages	\$400 million		

Assume that the **desired reserve ratio is 5%**.

- a. **(10 points)** Does Lupcon Bank hold any excess reserves? Is this a good liquidity management strategy? In your answer, address the benefits and the costs of holding reserves, from a perspective of the bank.
- b. **(10 points)** A bank is classified as well capitalized if its ratio of capital to assets exceeds 5%. Is Lupcon Bank well capitalized? Does the manager of Lupcon Bank pursue a good capital adequacy management strategy? In your answer, address the benefits and the costs of holding a high (low) amount of bank capital.
- c. **(10 points)** Suppose that Lupcon Bank receives bad news that a number of its mortgage borrowers default. As a result, the value of the bank's mortgages falls by \$20 million. That is, the market value of the mortgages becomes \$380 million, instead of \$400 million. What is the total value of Lupcon Bank's assets now? What does Lupcon Bank's balance sheet look like? How do these events affect its capital position?
- d. **(10 points)** A bank regulator, who monitors the performance of Lupcon Bank, requires Lupcon Bank to increase its capital to \$35 million. Describe the two ways the additional capital can be raised.
- e. **(10 points)** Suppose that the bank is successful in raising the additional capital. That is, Lupcon Bank now has \$35 million. What does the Lupcon Bank's new balance sheet look like? Given this balance sheet, which adjustment(s) of the asset holdings can you advise to Lupcon Bank?

**Part II (50 points)** Answer **five out of ten** questions below. All questions carry equal weight **10 points** each. Indicate the questions answers on the front pages of the exam.

**Q2 (10 points)** Consider the *Gordon growth model of asset pricing*:

$$P_0 = \frac{D_0(1+g)}{k_e - g} = \frac{D_1}{k_e - g}$$

Explain the meaning of each variable in the pricing equation. Suppose the Bank of Canada implements an expansionary monetary policy, which increases the money supply and decreases the short-term interest rates. Using the Gordon growth model, explain the predicted effect of the monetary policy on the stock prices.

**Q3 (10 points)** Define *transaction costs*. Describe the two ways in which financial intermediaries help lower transaction costs in the economy.

**Q4 (10 points)** Why are financial intermediaries willing to engage in information collection activities when investors in financial instruments may be unwilling to do so? Relate your answer to the free-rider problem that exists in financial markets.

**Q5 (10 points)** Explain the three reasons why Canadian banks fared better than banks in other countries during the global financial crisis of 2007-2009.

**Q6 (10 points)** How can a decline in real estate prices cause deleveraging and a decline in lending?

**Q7 (10 points)** “The commercial banking industry in Canada is less competitive than the commercial banking industry in the United States because in Canada only a few large banks dominate the industry, while in the United States there are 7000 commercial banks.” Is this statement true, false, or uncertain? Explain your answer.

**Q8 (10 points)** What is the primary source of funds for commercial banks? Why have banks been losing cost advantages in acquiring funds in recent years?

**Q9 (10 points)** “Because diversification is a desirable strategy for avoiding risk, it never makes sense for a bank to specialize in making specific types of loans.” Is this statement true, false, or uncertain? Explain your answer.

**Q10 (10 points)** How independent is the Bank of Canada in its choice of goals and policy instruments? In what ways can the government influence the conduct of monetary policy?

**Q11 (10 points)** According to the model of money supply,  $M = m \times MB$ , where  $m = (1+c)/(r+e+c)$ . The money multiplier  $m$  declined significantly during the period 1930-1933 and also during the recent financial crisis of 2008-2010 in the United States. Yet, the M1 supply decreased by 25% in the Great Depression period but increased by more than 20% during the recent financial crisis. Using the model of money supply, explain the differences in the observed outcomes.

**Part III (60 points)** Select the best option that completes the sentence or answers a question. Indicate your answer on the Scantron answer sheet. All questions in this part carry equal weight (2 point each)

- 1) General Electric announces that it is going to cut its dividends by \$0.02 per share in the future. This, everything else remaining the same, will cause its *current stock price* to \_\_\_\_\_.
  - A) increase
  - B) decrease
  - C) remain the same
  - D) fluctuate
  
- 2) If a forecast is made using all available information, then economists say that the expectation formation is \_\_\_\_\_.
  - A) rational
  - B) irrational
  - C) adaptive
  - D) reasonable
  
- 3) The *efficient markets hypothesis* suggests that if an unexploited profit opportunity arises in an efficient market, \_\_\_\_\_.
  - A) it will tend to go unnoticed for some time
  - B) it will be quickly eliminated
  - C) financial analysts are your best source of this information
  - D) prices will reflect the unexploited profit opportunity
  
- 4) Which of the following statements concerning external sources of financing for nonfinancial businesses in Canada is *true*?
  - A) Issuing marketable securities is the primary way that they finance their activities.
  - B) Bonds are the least important source of external funds to finance their activities.
  - C) Stocks are a relatively unimportant source of finance for their activities.
  - D) Selling bonds directly to the Canadian household is a major source of funding for Canadian businesses.
  
- 5) Property that is pledged to the lender in the event that a borrower cannot make his or her debt payment is called \_\_\_\_\_.
  - A) collateral
  - B) points
  - C) interest
  - D) good faith money
  
- 6) An example of the \_\_\_\_\_ problem would be if Brian borrowed money from Sean in order to purchase a used car and instead took a trip to Atlantic City using those funds.
  - A) moral hazard
  - B) adverse selection
  - C) costly state verification
  - D) agency

- 7) Government regulations designed to reduce the moral hazard problem include \_\_\_\_\_.
- A) laws that force firms to adhere to standard accounting principles
  - B) light sentences for those who commit the fraud of hiding and stealing profits
  - C) state verification subsidies
  - D) state licensing restrictions
- 8) *Debt contracts* \_\_\_\_\_.
- A) are agreements by the borrowers to pay the lenders fixed dollar amounts at periodic intervals
  - B) have a higher cost of state verification than equity contracts
  - C) are used less frequently to raise capital than are equity contracts
  - D) never result in a loss for the lender
- 9) For restrictive covenants to help reduce the moral hazard problem they must be \_\_\_\_\_ by the lender.
- A) monitored and enforced
  - B) written in all capitals
  - C) easily changed
  - D) impossible to remove
- 10) A major disruption in financial markets characterized by sharp declines in asset prices and firm failures is called a \_\_\_\_\_.
- A) financial crisis
  - B) fiscal imbalance
  - C) free-rider problem
  - D) "lemons" problem
- 11) In a bank panic \_\_\_\_\_.
- A) free-rider problem increases
  - B) bond prices increase
  - C) transactions costs increase
  - D) multiple banks fail
- 12) Although the CDIC was created to prevent bank failures, its existence encourages banks to \_\_\_\_\_.
- A) take too much risk
  - B) hold too much capital
  - C) open too many branches
  - D) buy too much stock
- 13) The result of *the too-big-to-fail policy* is that \_\_\_\_\_ banks will take on \_\_\_\_\_ risks, making bank failures more likely.
- A) small; fewer
  - B) small; greater
  - C) big; fewer
  - D) big; greater

- 14) During times of financial crisis, *mark-to-market accounting* \_\_\_\_\_.
- A) requires that a financial firms' assets be marked down in value which can worsen the lending crisis
  - B) leads to an increase in the financial firms' balance sheets since they can now get assets at bargain prices
  - C) leads to an increase in financial firms' lending
  - D) results in financial firms' assets increasing in value
- 15) Competition between banks \_\_\_\_\_.
- A) encourages greater risk taking
  - B) encourages conservative bank management
  - C) increases bank profitability
  - D) eliminates the need for government regulation
- 16) A common element in all of the banking crisis episodes in different countries is \_\_\_\_\_.
- A) the existence of a government safety net
  - B) deposit insurance
  - C) increased regulation
  - D) lack of competition
- 17) \_\_\_\_\_ is the process of researching and developing profitable new products and services by financial institutions.
- A) Financial engineering
  - B) Financial manipulation
  - C) Customer manipulation
  - D) Customer engineering
- 18) The process of transforming otherwise illiquid financial assets into marketable capital market instruments is known as \_\_\_\_\_.
- A) securitization
  - B) internationalization
  - C) arbitrage
  - D) program trading
- 19) The decline in traditional banking internationally can be attributed to \_\_\_\_\_.
- A) increased regulation
  - B) improved information technology
  - C) increasing monopoly power of banks over depositors
  - D) increased protection from competition
- 20) Bank's make their profits primarily by issuing \_\_\_\_\_.
- A) equity
  - B) negotiable CDs
  - C) loans
  - D) notice deposits

- 21) Long-term customer relationships \_\_\_\_\_ the cost of information collection and make it easier to \_\_\_\_\_ credit risks.
- A) reduce; screen
  - B) increase; screen
  - C) reduce; increase
  - D) increase; increase
- 22) All else the same, if a bank's liabilities are more sensitive to interest rate fluctuations than are its assets, then \_\_\_\_\_ in interest rates will \_\_\_\_\_ bank profits.
- A) an increase; increase
  - B) an increase; reduce
  - C) a decline; reduce
  - D) a decline; not affect
- 23) Which of the following functions are **not** performed by the Bank of Canada?
- A) Cheque clearing
  - B) Conducting economic research
  - C) Setting interest rates payable on time deposits
  - D) Issuing new currency
- 24) Changes in the \_\_\_\_\_ lead to \_\_\_\_\_ changes in the money supply.
- A) monetary base; multiple
  - B) monetary base; equal
  - C) inflation rate; multiple
  - D) inflation rate; equal
- 25) The Bank of Canada's *ultimate objective* is \_\_\_\_\_.
- A) price stability
  - B) to keep interest rates low
  - C) economic growth
  - D) low unemployment
- 26) Supporters of the current system of the Bank of Canada's independence believe that a less autonomous Bank would \_\_\_\_\_.
- A) adopt a short-run bias toward policymaking
  - B) pursue overly expansionary monetary policies
  - C) be more likely to create a political business cycle
  - D) do each of the above
- 27) The three players in the money supply process include \_\_\_\_\_.
- A) banks, depositors, and the Department of Finance
  - B) banks, depositors, and borrowers
  - C) banks, depositors, and the central bank
  - D) banks, borrowers, and the central bank

28) When the Bank of Canada sells a government bond to a bank, *reserves* in the banking system \_\_\_\_\_ and *the monetary base* \_\_\_\_\_, everything else held constant.

- A) increase; increases
- B) increase; decreases
- C) decrease; increases
- D) decrease; decreases

29) The Bank of Canada does not tightly control the monetary base because it does not completely control \_\_\_\_\_.

- A) open market purchases
- B) open market sales
- C) borrowed reserves
- D) the bank rate

30) The risk to the entire payments system due to the inability of one financial institution to fulfill its payment obligations in a timely fashion is known as \_\_\_\_\_.

- A) systemic risk
- B) the principal-agent problem
- C) moral hazard
- D) credit risk