

## First Midterm Exam

Fall 2019

Econ 180-266

Closed Book.

Calculators OK.

Time Allowed: 1 Hour 15 minutes

All Questions Carry Equal Marks

Please write your answers on the page below the question (or circle the correct answer).

### Section A: True or False

3 points for each correct answer; -3 points for each incorrect answer; 0 points for questions left unanswered.  
Total score on section A cannot be negative.

Please say if each of these statements is true or false.

1. The Federal Reserve discount window provides uncollateralized loans to banks.

TRUE or FALSE

2. The Federal Reserve system was set up during the civil war to manage national banks.

TRUE or FALSE

3. A Treasury auction announcement specifies the coupon rate of the security that is to be issued.

TRUE or FALSE

4. FDIC deposit insurance is financed by a levy on banks.

TRUE or FALSE

5. LIBOR is based on a survey of what banks say they would pay to borrow, not actual transacted rates.

TRUE or FALSE

**Section B: Multiple Choice.**

4 points for each correct answer; -1 points for each incorrect answer; 0 points for questions left unanswered.  
Total score on section B cannot be negative.

1. Which of the following two institutions were created by the Bretton Woods agreement?
  - A. World Trade Organisation and World Bank
  - B. World Trade Organisation and International Monetary Fund
  - C. World Bank and International Monetary Fund
  - D. United Nations and World Trade Organisation
  - E. United Nations and World Bank
  
2. Which of the following is closest to the Return on Assets for major US banks?
  - A. 1 percent.
  - B. 5 percent.
  - C. 10 percent.
  - D. 20 percent.
  - E. 50 percent.
  
3. According to the Expectations Hypothesis of the term structure, if one-year yields are 2 percent, and the one-year interest rate is expected to be 1.4 percent in one years time, the two-year yield today should be:
  - A. 0.8 percent.
  - B. 1.4 percent.
  - C. 1.7 percent.
  - D. 2 percent.
  - E. 2.6 percent.
  
4. Which is the present format of US Treasury auctions?
  - A. Descending price open outcry.
  - B. Ascending price open outcry.
  - C. Reserve auction.
  - D. Single price sealed bid.
  - E. Multiple price sealed bid.
  
5. The coinage act of 1873 established which of the following monetary systems in the US?
  - A. A single gold standard.
  - B. A bimetallic system in which both gold and silver operate as money.
  - C. A system of fixed exchange rates between the dollar and other currencies.
  - D. A system in which other governments could exchange dollars for gold, but the private ownership of gold was forbidden in the US.
  - E. Paper money issued by the Federal Reserve.
  
6. A financial instrument which does not promise the holder any fixed payment but entitles him/her to a claim of the net income is called which of the following?
  - A. A bond.
  - B. Preferred stock.
  - C. Equity.
  - D. Receivable.
  - E. Credit.

7. Which of the following is **not** an asset of commercial banks?
- A. Business loans.
  - B. U.S. government securities.
  - C. Cash.
  - D. Stocks.
  - E. Mortgages.
8. Which of the following best describes an investment bank?
- A. A bank that specializes in offering money market mutual funds to retail investors.
  - B. A bank that accepts deposits from customers.
  - C. A bank that bundles deposits from many small investors.
  - D. A bank that accepts only deposits from institutional investors.
  - E. A bank that specializes in underwriting securities and advising on mergers and acquisitions.
9. Which of the following is closest to the definition of M1?
- A. Cash in circulation.
  - B. Cash in circulation plus reserves that banks hold at the Fed.
  - C. Cash in circulation plus reserves that banks hold at the Fed, plus the value of checking accounts.
  - D. Cash in circulation plus reserves that banks hold at the Fed, plus the value of checking accounts and savings deposits.
  - E. Cash in circulation plus reserves that banks hold at the Fed, plus the value of checking accounts and savings deposits and money market mutual funds.
10. What is the current approximate level of ten-year Treasury yields?
- A. 1.1 percent.
  - B. 1.7 percent.
  - C. 3.1 percent.
  - D. 3.9 percent.
  - E. 5.5 percent.

### Section C: Other questions

1. (10 points). What is the present value of a project which pays \$10 after one year and \$110 after two years, with a discount rate of 5 percent per year?
2. (15 points). Please briefly define each of the following concepts (in about one sentence each):
- (a) A shelf registration of an IPO.
  - (b) A bank holding company.
  - (c) Regulation Q.
  - (d) A syndicated loan.
  - (e) Herstatt risk.
3. (10 pts). You pay \$10,000,000 for Treasury securities on Thursday as part of an overnight repo agreement. The next day, you sell the Treasury securities back with a repo rate of 1.8 percent. How much will you get for these Treasury securities? (Please give a dollar amount).
- 4 (10 points). Consider a fractional reserve banking system in which the monetary base is \$100. All banks have a reserve ratio of 20%, and lend out everything else. All loans that are made are immediately redeposited in the banking system. What is the money supply?

## Solutions

Part A.

1. False.
2. False.
3. False.
4. True.
5. True.

Part B.

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

1. It is  $\frac{10}{1.05} + \frac{110}{1.05^2} = 109.30$  .

2. (a) A shelf registration is a registration of an initial public offering (IPO) with the SEC where the company does not immediately proceed with the IPO.  
(b) A bank holding company is a corporation that holds one or more banks.  
(c) Regulation Q is a now defunct rule that capped interest rates.  
(d) A syndicated loan is a loan made by more than one bank.  
(e) Herstatt risk is the risk of a counterparty going bankrupt in between when they receive one leg of an FX transaction and when they make payment on the other leg. Some people gave answers which didn't specify that it is a foreign exchange or currency transaction; they lost 1 point.

3. The price solves the equation

$$\frac{P_f - 10,000,000}{10,000,000} \times \frac{360}{1} = 0.018$$

Solving this gives a price of \$10,000,500.

4.  $\$100/0.2 = \$500$ .