ECO 209Y
MACROECONOMIC THEORY AND POLICY

Term Test #3

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INSTRUCTIONS:

- The total time for this test is ***1 hour and 45 minutes***.
- The only aid allowed is a ***non-programmable*** calculator.
- ***Write your name and identifying information above but keep this test paper closed until the start of the test is announced.***
- There are three parts to the test: ***Part I*** consists of 10 multiple-choice questions (20 points); ***Part II*** consists of one quantitative problem (10 points); and ***Part III*** includes 3 short-answer questions (30 points). The ***total*** point-value of the test is ***60 points***.
- The answers to the 10 multiple-choice questions of ***Part I*** must be recorded in the ***bubble sheet*** provided on **page 10** of this test paper. Only the answers recorded in the bubble sheet will be marked. Cells left blank will receive a zero mark for that question. No deductions will be made for incorrect answers.
- In ***Parts II and III***, write your answers clearly and concisely in the space provided immediately after each question. ***Your entire answer must fit in the designated space.*** No extra space/pages are possible and you cannot use blank space for other questions.
- ***It is best to write in PENCIL and use an ERASER as needed.*** This way you can make sure to fit your final answer in the appropriate space.
- ***Please write legibly.*** If I can't read your handwriting, I can't award you any marks!

PART I (20 points)

Instructions:
Enter your answer to each of the 10 multiple-choice questions in the ***bubble sheet*** provided on **page 10** below. Each correct answer is worth ***2 points***. ***Note that no deduction will be made for incorrect answers.*** Table cells left blank will receive zero points. **Do NOT guess your answers! Manage your time properly!**

1. Last January the yield on 3-month Treasury Bill (T-bill) was about 1.63% in Canada and 2.37% in the US. That month one Canadian dollar could buy about 0.75 US dollars. According to the interest parity condition, in January the financial markets were most likely expecting

- **A)** the yield on Canada's T-bills to increase by about 0.74 percentage points and the exchange rate for the US dollar to remain unchanged.
- **B)** the yield on US's T-bills to decrease by about 0.74 percentage points and the exchange rate for the US dollar to remain unchanged.
- **C)** the nominal interest rate differential between the U.S. and Canada to remain unchanged and the exchange rate for the US dollar to appreciate by about 0.74%.
- **D)** the nominal interest rate differential between the U.S. and Canada to remain unchanged and the exchange rate for the US dollar to depreciate by about 0.74%.
- **E)** both the nominal interest rate differential between the U.S. and Canada and the exchange rate for the US dollar to remain unchanged.

2. Consider a model of an open economy with fixed-price level, flexible exchange rates, and perfect capital mobility. Given an increase in the level of U.S. income, which one of the following statements is true with respect to its impact on the Canadian economy?

- **A)** Net exports will increase and equilibrium income will rise.
- **B)** Net exports will increase, the Canadian dollar will appreciate, and the balance in the capital account will deteriorate.
- **C)** Exports will increase, the Canadian dollar will appreciate but both the balances in the current and the capital accounts will remain unchanged.
- **D)** Exports will increase while imports will decrease, and thus the balance in the current account will improve while the balance in the capital account will deteriorate.
- **E)** Net exports will increase, the Canadian dollar will depreciate, and the balance in the capital account will deteriorate.

Use this space for rough work

3. Consider a fixed-price level model of an open economy with flexible exchange rates and imperfect capital mobility. If the government wishes to increase interest rates without changing the value of the Canadian dollar, the government should

A) increase its expenditure and cut the money supply.
B) raise its expenditure and raise the money supply.
C) leave its expenditure unchanged while increasing the money supply.
D) lower its expenditure and cut the money supply.
E) lower its expenditure and raise the money supply.

4. Consider a fixed-price level model of an open economy with flexible exchange rates and imperfect capital mobility. An increase in the interest rate that prevails in the rest of the world will cause

A) the domestic interest rate to rise, the level of output, to fall and the exchange rate to rise.
B) the domestic interest rate, the level of output, and the exchange rate all to rise.
C) the domestic interest rate to rise, the level of output to rise, and the exchange rate to fall.
D) the domestic interest rate to fall, the level of output to rise, and the exchange rate to fall.
E) none of the above.

5. Assume that the currency-deposit ratio is 25%, the desired reserve-deposit ratio is 15%, and total money supply is $1,875 billion. What is the amount of high-powered money if there are no excess reserves in the banking system?

A) $500 billion
B) $600 billion
C) $700 billion
D) $800 billion
E) none of the above

6. Suppose there was monetary equilibrium in the economy. If now the banks' desired reserve ratio increased while the public's desired currency-deposit ratio remained unchanged, which one of the following would be true in the new monetary equilibrium?

A) The monetary base would decrease.
B) The money supply would rise.
C) The money multiplier would increase.
D) Banks will give more loans to the public.
E) Currency in hand of the public would decrease.

Use this space for rough work

7. The monetary base is $20 billion, currency held by commercial banks is equal to $3 billion, commercial banks' deposits at the Central Bank are $7 billion, and the public's deposits at the commercial banks are $70 billion. The money multiplier is equal to

A) 2.5.
B) 4.0.
C) 3.0.
D) 5.0.
E) none of the above.

8. Suppose there was monetary equilibrium in the economy. If now the public's desired currency-deposit ratio increased while the banks' desired reserve ratio remained unchanged, which one of the following would be true in the new monetary equilibrium?

A) The monetary base would decrease.
B) Banks' reserves would decrease.
C) The money supply would rise.
D) The money multiplier would increase.
E) Banks will give more loans to the public.

9. Suppose that households and firms always keep 20 percent of their money holdings in the form currency and that the money multiplier is 3. If the government borrows $100 million from the central bank to finance a new expenditure, the demand deposits of the public will

A) remain unchanged.
B) increase by $20.
C) increase by $300.
D) increase by $240.
E) increase by $100.

10. Consider an economy currently in monetary equilibrium. The money supply is $80 billion. The public likes to hold one-quarter of their money holdings in cash (CU_P). Banks like to hold one-sixth of their customers' deposits (D) as reserves (R). Which of the following statements is correct?

A) The money multiplier (mm) is 2.5
B) The reserves of the banks (R) are $10 billion.
C) The public's desired currency-deposit ratio (cu) is 0.25.
D) The monetary base (B) is $30 billion.
E) Both B) and D) are correct.

Use this space for rough work

PART II (10 points)

Note: This question is taken literally from Problem Set 11.

Consider the following Post-Keynesian Structuralist model of a closed economy:

- There are three rates of interest in this model: 1) the loans rate of interest (i_L) set by the commercial banks; the bank rate (i^*) set by the central bank; and the bond rate of interest (i) determined by the demand and supply of money.
- The equation of the demand for loans is $i_L = -0.1\,L + 0.019\,Y$, and banks are willing to supply any amount of loans at $i_L = 1.5\,i^*$.
- There is no currency in this model, so the money supply consists only of bank deposits.
- Banks' reserves (R) are kept constant at 5% of the money supply (i.e., bank deposits).
- Banks' assets consist only of loans (L) and reserves (R), and banks' liabilities only of clients' deposits. Banks' equity is 16.
- The supply of money is $M^S = M$ and the demand for money is $M^D = 0.3\,Y - 10\,i - 130$.

a) If the bank rate is set at $i^* = 4$, what is the level of bank loans (L) as a function of real income (Y)? **(2 points)**

b) As a function of real income (Y), what is the equation for the money supply (M^S)? **(2 points)**

c) What is the equation for the *LM* curve? **(2 points)**

d) If the equation for the *IS* curve is $i = 15 - 0.01\ Y$, what are the equilibrium values of income and the bond rate of interest? **(2 points)**

e) In equilibrium, what are the values of bank loans and the money supply? **(2 points)**

PART III (30 points)

Instructions: Answer the following three questions in the space provided. Each question is worth 10 points.

1. **Critically evaluate the following statement:** *"If the central bank engages in an open market purchase, the short-run impact will be an increase in the level of income, an appreciation of the exchange rate, a deterioration of the current account, and an improvement of the capital account."* **(Show your answer with the help of a diagram and explain the economics. Consider the fixed-price level model of an open economy with flexible exchange rates and imperfect capital mobility.**

2. **Critically evaluate the following statement:** *"If political instability reduces consumers' confidence, then income will fall, the rate of interest will rise, the exchange rate will appreciate, the balance in the current account will deteriorate, and the balance in the capital account will improve."* **(Show your answer with the help of a diagram and explain the economics. Consider the fixed-price level model of an open economy with flexible exchange rates and imperfect capital mobility.**

3. Consider the Neo-Keynesian monetary model where the central bank implements monetary policy following an interest-rate rule. Suppose that the central bank increases the target for the overnight rate of interest. What will be the impact of such a policy on equilibrium income, equilibrium rate of interest, and equilibrium real money stock? **(Show your answer with the help of a diagram and <u>explain</u> the economics. Consider the fixed-price level model of a closed economy.)**