Concordia University
Department of Economics

ECON 203 – INTRODUCTION TO MACROECONOMICS

Winter 2014

COMMON FINAL EXAMINATION VERSION 1 AND ANSWERS

FAMILY NAME: _____ **GIVEN NAME(S):**_____

STUDENT NUMBER: _____

Please read all instructions carefully.

1. This is a three-hour exam (180 minutes). The questions are worth 150 marks altogether. It is a good strategy to spend one minute per mark for your answers (150 minutes) and spend the remaining time (30 minutes) to review your answers.

2. This exam consists of four parts:
   (i) Part I: 15 multiple-choice questions (30 marks);
   (ii) Part II: Conceptual questions, transformed into 15 multiple-choice questions, (30 marks);
   (iii) Part III: Five algebraic questions, transformed into 25 multiple-choice questions, (50 marks), and
   (iv) Part IV: Multi-part policy questions, answer all parts (40 marks).

3. Write your name, student ID and answers to the multiple-choice questions (parts I, II and III) on the computer scan-sheet with a **PENCIL**. For Part IV, write all your answers on this exam with pen or pencil. Do not use additional booklets.

4. You are allowed to use a non-programmable calculator and a paper dictionary.

5. You are not allowed to tear any pages out of this exam.

Grades:

Parts I+II+III: _____

Part IV: _____

Total: _____

Part I: Multiple Choice Questions (Total=30 marks).

1. If nominal GDP is falling and the price level is rising, then…
   A) Real GDP is rising.
   B) Real GDP is falling.
   C) Real GDP is rising as rapidly as prices are rising.
   D) Real GDP is falling as rapidly as prices are rising.
   E) No conclusion can be drawn concerning the nominal GDP of the economy on the basis of this information.

2. Since discouraged workers are _____ the labour force, the unemployment rate ____ the true level of unemployment.
   A) Excluded from; under-estimates
   B) Included in; under-estimates
   C) Excluded from; over-estimates
   D) Included in; over-estimates
   E) Not related to; accurately estimates.

3. Which of the following is (are) CORRECT?
   A) Real and nominal interest rates are always positive.
   B) If income (Y) equals zero, then the marginal propensity to save (MPS) is also equal to zero.
   C) If Y<AE, the price level stays constant and Y will eventually rise until Y=AE.
   D) The consumer price index often underestimates the true rise in the cost of living.
   E) All of the answers are correct.

4. If the natural rate of unemployment falls, the Y_p curve will shift __ and the price level will ___.
   A) Rightward; fall
   B) Rightward; rise
   C) Leftward; fall
   D) Leftward; rise
   E) Leftward; not be affected

5. The aggregate demand curve is…
   A) Vertical if full employment exists.
   B) Horizontal when there is considerable unemployment in the economy.
   C) Downward-sloping because the marginal propensity to consume (MPC) is between zero and one.
   D) Downward-sloping because production costs decrease as real output increases.
   E) None of the answers is correct.

6. How does an economy self-adjust to a recessionary/contractionary gap?
   A) The AS curve shifts to the left and the AD curve shifts to the right until the gap is closed.
   B) The AS curve shifts to the right until the gap is closed.
   C) The AD curve shifts to the right until the gap is closed.
   D) Potential output will decrease until the gap is closed.
   E) None of the answers is correct.

7. Equilibrium income in an **open** economy with government occurs when
   A) Net exports equal zero.
   B) GDP equals GNP.
   C) Private savings equal investment.
   D) Private savings equal investment, and tax revenue equals government spending.
   E) None of the answers is correct.

8. Which of the following describe(s) automatic stabilizers?
A) A positive marginal propensity to consume.
B) A money demand function that is independent of the interest rate.
C) A lump-sum, constant, per-capita income tax system.
D) A fractional, positive reserve ratio.
E) All of the answers are correct.

9. Which of the following is (are) CORRECT about the marginal propensity to consume (MPC)?
A) It is equal to zero when income is zero.
B) If the MPC is high, monetary policy is more effective in affecting GDP.
C) If the MPC is low, Y_p is less likely to grow in the future.
D) If the MPC is high, capital stock accumulation is likely to be high.
E) All of the answers are correct.

10. Which of the following is (are) likely to increase future structural budget deficits?
A) A rise in current private and public savings.
B) A fall in average life expectancy of the working-age population due to obesity.
C) The central bank revising its inflation target from 2 percent to 5 percent.
D) A lot of baby-boomers (born in the 1960s) are working beyond the retirement age of 65.
E) All of the answers are correct.

11. A change in _____ means that fiscal policy ____ be used to stabilize both inflation and output.
A) Investment confidence; can
B) Consumer confidence; cannot
C) Input cost; cannot
D) Our trading partner's income shock; cannot
E) All of the answers are correct.

12. If the Bank of Canada sells bonds in the open market, the price of bonds will ___, the money supply will ___ and the inflation rate will ____.
A) Rise; rise; rise
B) Rise; fall; fall
C) Rise; fall; rise
D) Fall; fall; fall
E) Fall; rise; fall

13. Suppose the price of a basket of goods sells for US$80 in the US and C$100 in Canada. The current nominal exchange rate is C$1.15=US$1. Purchasing power parity predicts that there will be an increase in demand for _____, an increase in the supply of _____ and, eventually, the C$ will _____. The equilibrium nominal exchange rate will become C$___ =US$1.
A) US goods; US$; appreciate; 1.05
B) US goods; C$; depreciate; 1.25
C) Canadian goods; US$; appreciate; 1.10
D) Canadian goods; C$; depreciate; 1.35
E) None of the answers is correct.

14. Consider the situation where you can buy a Canadian asset that pays 3% after one year, or a U.S. asset that pays 2.5% after one year. Both assets are equally safe, and it is certain that you would receive your invested money plus interest payments one year from now. The exchange rate between Canadian dollars and U.S. dollars is flexible, and the current e is C$1.1=US$1. Using the Interest Rate Parity condition, what is the expected future exchange rate?
A) 0.9455.
B) 1.0455.
C) 1.1055.
D) 1.1555.
E) 1.2455.

15. Which of the following is (are) CORRECT?
A) Solow growth residuals show how technological improvements contribute to output growth.
B) Diminishing marginal productivity implies that if the labour force increases and the capital stock stays constant, then per capita GDP will rise.
C) Constant returns to scale assumes that technology is not constant.
D) Growth accounting takes into account the negative side effects of pollution.
E) All of the answers are correct.

Part II: Conceptual Questions (Previously True-False questions) (Total=30 marks).

For questions 16-18, refer to Concept #1: Economic fluctuations and Policy Interventions

16. In response to the 2008 economic recession, the Canadian federal government increased government spending through the Economic Action Plan (The Plan). Canada has a flexible exchange rate. Which of the following statements is (are) CORRECT?
A) The Plan is likely to crowd-in private investment expenditure.
B) The Plan is likely to be more effective if the marginal propensity to import is high.
C) The Plan is likely to be more effective if income taxes are set as a percentage of income rather than a constant, lump-sum tax.
D) The Plan is likely to be more effective if Canada had a fixed exchange rate regime.
E) All of the answers are correct.

17. Continue with the previous question: Given that Canada has a flexible exchange rate, The Plan is likely to ____ our net exports and ___ net capital inflow into our capital account.
A) Decrease; discourage
B) Increase; discourage
C) Decrease; encourage
D) Increase; encourage
E) Not affect; encourage

18. Continue with the previous question: If the Bank of Canada wants to coordinate with The Plan in order to maximize the increase in GDP, it should ____ the target overnight interest by _____.
A) Increase; conducting SPRA
B) Increase; conducting SRA
C) Decrease; conducting SPRA
D) Decrease; conducting SRA
E) Not change; selling bonds in the open market

For questions 19-21, refer to Concept #2: Economic Adjustments

19. Since mid-2013, the world demand for Canadian exports of natural resources has been falling. This will lead to a ____ shift in the ____ curve.
A) Leftward; AS
B) Leftward; AD
C) Rightward; AS
D) Rightward; AD
E) Rightward; Yp

20. Continue with the previous question: Because Canada has a flexible exchange rate, the Canadian dollar will ____. This change in the value of the Canadian dollar will _____ Canada's output gap a bit.
A) Depreciate; magnify
B) Appreciate; magnify
C) Depreciate; lessen
D) Appreciate; lessen
E) Appreciate; not affect

21. Continue with the previous question: In the long run, if neither the Canadian government nor the Bank of Canada actively intervene in the economy, Canada's economy will return to its initial Y_p because _____.
A) Its AD curve will shift to the left.
B) Its AS curve will shift to the left.
C) Its AD curve will shift to the right.
D) Its AS curve will shift to the right.
E) Its AD and AS curves will shift to the left.

For questions 22-24, refer to Concept #3: Unemployment

22. Which of the following is (are) used to calculate the natural rate of unemployment?
A) Cyclical unemployment.
B) Frictional unemployment.
C) Structural unemployment.
D) Only B and C are correct.
E) All of the answers are correct.

23. Continue with the previous question: Of the three types of unemployment, which type(s) can monetary policies minimize most effectively and quickly?
A) Cyclical unemployment.
B) Frictional unemployment.
C) Structural unemployment.
D) Only A and B are correct.
E) Only B and C are correct.

24. If the growth rate of the labour force falls from 3 percent to 2 percent while employment continues to grow by 2.5 percent, then…
A) The unemployment rate will fall by about 0.5 percent.
B) The unemployment rate will rise by about 0.5 percent.
C) The unemployment rate will fall by about 3.5 percent.
D) The unemployment rate will rise by about 3.5 percent.
E) The unemployment rate will fall by about 5.5 percent.

For questions 25-27, refer to Concept #4: Budget Balance, Structural Budget Balance, and Fiscal Policies

25. If the government increases both spending and autonomous (lump-sum) taxes by 20 percent, this should…
    A) Have no effect on the level of national income.
    B) Have a contractionary effect on national income.
    C) Have an expansionary effect on national income.
    D) Make the AE function flatter.
    E) Both C and D are correct.

26. If you are told that the government had a budget deficit of $100 billion, then you should conclude that…
    A) Fiscal policy was contractionary.
    B) Fiscal policy was producing a structural deficit.
    C) There was an economic recession.
    D) The labour force was shrinking.
    E) None of the answers is correct.

27. Consider the budget balance (BB) equation of $BB = tY - G$. Assume that t is 0.25, potential output is 1,000 and G is 200. Which of the following statements is (are) correct?
    A) The structural budget balance (SBB) is 50.
    B) The budget balance is zero if there is a negative GDP gap of 20 percent.
    C) There will be a budget balance of zero when Y is 850.
    D) Fiscal policies only affect BB but not SBB.
    E) Both A and B are correct.

For questions 28-30, refer to Concept #5: Monetary Policies

28. Since 2013, the Bank of Japan has pushed down the value of the Japanese yen. It can accomplish this by…
    A) Cutting interest rates.
    B) Selling bonds in the open market.
    C) Encouraging banks to hold a higher reserve ratio.
    D) Encouraging the public to have a higher currency drain ratio.
    E) Both A and B are correct.

29. Continue with the previous question: In the short run, what is (are) likely to happen as the yen depreciates?
    A) Japan's net exports will improve.
    B) The Japanese will be more likely to take vacations overseas.
    C) Japan's debt-to-GDP ratio will rise.
    D) Japan's investment confidence will fall.
    E) All of the answers are correct.

30. Continue with the previous question: In the long run, what is (are) likely to happen as the yen depreciates?
    A) Japan's production costs will fall.
    B) Japan will have a balance of payments surplus.
    C) Other countries, such as South Korea and Singapore, will also devalue their currencies.
    D) Japan's price level will rise and may lead to a real exchange rate depreciation.
    E) All of the answers are correct.

Part III: Analytical Questions (Total=50 marks).

For questions 31-35, refer to the following (Taylor Rule):

The Taylor rule states that a central bank can monitor inflation and GDP by following the equation $i = i_0 + (\pi - \pi^*) + (Y - Y_p)$. To start, suppose $\pi^* = 2\%$, $\pi = \pi^*$ $Y = Y_p$ and $i_0 = 9\%$.

31. The initial value of i is ____.
    A) 8%
    B) 9%
    C) 10%
    D) 11%
    E) 12%

32. Now suppose a drop in investment confidence leads to $(Y - Y_p) = -4\%$. According to the Taylor rule, and putting aside inflation rates for now, the central bank should set a new i of ____. If $\pi = \pi^* - \Delta i$, the new inflation rate will be equal to ____.
    A) 3%; 5%
    B) 4%; 6%
    C) 5%; 6%
    D) 6%; 8%
    E) 7%; 8%

33. Suppose the central bank knew that π would change. To balance between its inflation and GDP targets, what interest rate should the central bank set, knowing that $\pi = \pi^* - \Delta i$? *[Hint: Solve the new i as an unknown.]*
    A) 4.5%.
    B) 5.5%.
    C) 6.5%.
    D) 7.5%.
    E) None of the answers is correct.

34. Compare your answers from #31 and #33: Interest rate parity predicts a future ___ in the Canadian dollar and _____ in its net exports.
    A) Appreciation; rise
    B) Appreciation; fall
    C) Appreciation; remain constant
    D) Depreciation; rise
    E) Depreciation; fall

35. Compare your answers from #31 and #33: Given the change in the interest rate, the value of Canada's current account should ____ and the value of its capital account should ____.
    A) Fall; rise
    B) Fall; fall
    C) Rise; rise
    D) Rise; fall
    E) Remain constant; fall

For questions 36 to 40, refer to the following (Fiscal and Monetary Policies):

A simplified economy is specified as below:

I. Goods market, all values of C, I, G and NX are in billions of C$:

Consumption expenditure:	C = 110 + 0.8(Y-T)	Lump-sum constant taxes:	510
Investment expenditure:	I = 1,100 – 4,800*i*	Exports:	60
Government expenditure:	G = 510	Imports:	40

II. Money market, all M^d values are in billions of C$: Define interest rate *i* as 0.025, not 2.5.

Interest rate: *i* = 0.025 (which is 2.5%) Money demand: M^d = 1,500 - 19,300*i*

36. What is the equilibrium value of Y?
A) 6,010.
B) 6,060.
C) 7,350.
D) 7,800.
E) 8,040.

37. What is the equilibrium level of private saving (S_p)?
A) 600.
B) 800.
C) 1,000.
D) 1,200.
E) None of the answers is correct.

38. The Conference Board of Canada has recently announced that consumer confidence in Canada fell. The new consumption expenditure is now C = 105 +0.8(Y-T). What is the new equilibrium value of Y?
A) 5,775.
B) 6,025.
C) 6,035.
D) 7,575.
E) 7,875.

39. As consumer confidence falls from 110 to 105, round 1 dictates that ΔG=ΔY=5, or 5 units of consumer goods (such as food) will not be consumed. Suppose that these food workers cut their spending on clothing following the consumption expenditure equation given above and that clothing workers cut their spending on bicycles. This round 3 effect implies that spending on bicycles will fall by ____.
A) 2.5
B) 3.2
C) 3.6
D) 4.5
E) 5.0

40. Suppose the Bank of Canada (BOC) is trying to reverse this adverse effect on the economy. For simplicity, it is not concerned about inflation for now. Approximately what new interest rate should the BOC set?
A) 1.6%.
B) 1.8%.
C) 2.0%.
D) 2.2%.
E) 2.4%.

For questions 41 to 45, refer to the following (Real Exchange Rates and PPP):

Suppose that, in 2005, the price levels in the United States and Canada were 100. By 2011, the price level in the United States increased to 240, while the price level in Canada rose to 150. Suppose that, in 2005, the nominal exchange rate was US$1 = C$1.80 and that the real exchange rate was 1.80 (from Canada's perspective).

41. What must be the new nominal exchange rate in 2011 if the real exchange rate had remained constant at the 2005 level (from Canada's perspective)?
A) 0.95.
B) 1.03.
C) 1.08.
D) 1.12.
E) 1.33.

42. Suppose the initial nominal exchange rate in 2005 was fixed. By 2011, Canada would have experienced a real exchange rate ____ because its real exchange rate would be equal to ____.
A) Appreciation; 1.05.
B) Appreciation; 1.22.
C) Appreciation; 1.75.
D) Depreciation; 2.55.
E) Depreciation; 2.88.

43. Continue with the previous question: Because the Canadian dollar is ___, Canada is likely experiencing _____.
A) Overvalued; an inflationary gap.
B) Overvalued; a recessionary gap.
C) Correctly valued; full employment.
D) Undervalued; an inflationary gap.
E) Undervalued; a recessionary gap.

44. Continue with the previous question: To maintain the fixed exchange rate, the Bank of Canada needs to sell ____ dollars and our balance of payments will be ____.
A) US; zero
B) US; negative
C) Canadian; zero
D) Canadian; negative
E) None of the answers is correct.

45. Continue with the previous question: If the Bank of Canada were to return to a flexible exchange rate regime in 2011, the nominal exchange rate in 2011 will be equal to US$1 = C$_____ if the Purchasing Power Parity were to hold.
A) 0.465
B) 0.625
C) 1.145
D) 1.585
E) 2.175

For questions 46 to 48, refer to the following (Money Supply):

46. Suppose that Person A has $550 (cash). She can put some of this money into a bank account she has with BMO as well as hold a fraction of this money as cash for transaction purposes. Suppose she has a currency drain ratio of 10 percent or 0.1 and the BMO has a reserve ratio of 20 percent or 0.2. BMO lends out the remaining money to Person B. BMO's balance sheet will show that deposits from this transaction are equal to ____.
A) $495
B) $500
C) $505
D) $510
E) None of the answers is correct.

47. Continue with the previous question: The money multiplier is equal to ____.
A) 2.67
B) 3.33
C) 3.67
D) 4.19
E) 5.33

48. Continue with the previous question: The new money supply is equal to ____. *[Hint: Leave your money market multiplier from the previous question with as many decimal places as possible.]*
A) $1,320
B) $1,815
C) $2,235
D) $2,667
E) $3,455

For questions 49 to 50, refer to the following (Money Demand):

The demand for money is given as Md = 1,400 - 70*i*, where Md is the quantity of money demanded (in billions of dollars) and *i* is the interest rate in percentage points. For example, if *i* = 2%, leave *i* = 2. The supply of money is set at $700 billion. Suppose that all demand deposits are held in commercial banks and that all commercial banks have a fractional reserve ratio equal to 40 percent.

49. The equilibrium interest rate is equal to ____. If the Bank of Canada wants the interest to be 5 percent, it has to ____ bonds in the amount of ____ billion.
A) 6%; buy; $220
B) 6%; sell; $240
C) 10%; buy; $100
D) 10%; sell; $120
E) 10%; buy; $140

50. Can the Bank of Canada set the interest rate at 5 percent and at the same time set money supply at $800 billion?
A) No, because if the interest rate is at 5 percent, there is excess demand for money.
B) No, because if the money supply is at $800 billion, the interest rate should be at 8 percent.
C) Yes, because the interest rate and money supply are controlled through open-market operations.
D) Yes, a central bank has full control over the monetary base and target overnight interest rates.
E) Both C and D are correct.

For questions 51 to 52, refer to the following (GDP):

Item	Amount (billion of $)
Government purchases of goods and services	300
Wages paid to labor	1,400
Indirect taxes	100
Profits	300
Export	400
Subsidies	???
Consumption expenditure	1,050
Interest and miscellaneous investment income	150
Import	300
Depreciation or Capital consumption allowance	150
Net investment	400

51. What is the value of GDP?
A) $1,200.
B) $1,400.
C) $1,600.
D) $1,800.
E) $2,000.

52. What is the value of subsidies?
A) $30.
B) $55.
C) $70.
D) $100.
E) None of the answers is correct.

For questions 53 to 55, refer to the following (GDP Deflator):

Suppose that in 1986 (the base year) the total output in a single-good economy was 7,107 oranges, where each orange was priced at $5. Finally, assume that in 1995 the price per orange was $3 and that 21,061 were purchased.

53. What is the GDP deflator for 1995?
A) 60.
B) 80.
C) 100.
D) 160.
E) 180.

54. What is real GDP for 1986?
A) $28,555.
B) $30,340.
C) $35,535.
D) $42,570.
E) None of the answers is correct.

55. What is the real GDP for 1995?
A) $95,305.
B) $110,880.
C) $140,408.
D) $140,895.
E) None of the answers is correct.

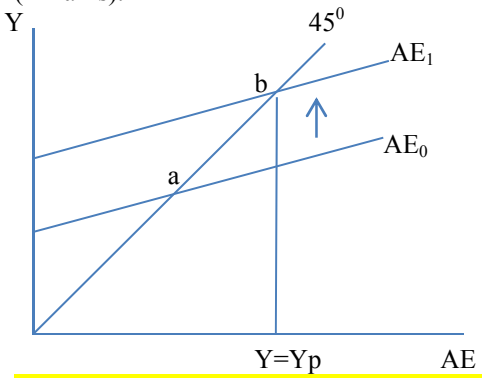
Part IV: Answer the following question. ANSWER ALL PARTS (Total = 40 marks).

In 2008, the liquidity crisis in the US and EU banking systems had driven the world into a global recession. The liquidity crisis refers to commercial banks lending massive amounts of money to their customers who subsequently were unable to repay their loans. Since 2008, the US Federal Reserve, the Bank of Canada and the European Central Bank have been increasing the money supply to ease the liquidity crunch. Their respective governments have also been increasing spending to boost their economies.

> ***Article 1: Stimulus gamble: How Ottawa saved the economy…***
> The Globe and Mail, Feb. 10 2014
>
> Canada's Finance Minister Mr. Jim Flaherty's 2009 budget announced a federal stimulus package worth $47-billion. Five years later, the products of Canada's massive stimulus program are still visible. Cities and towns across the country have new roads and updated hockey rinks. Many homeowners enjoy finished basements and new decks because of a temporary home renovation tax credit.
>
> The 2009 plan was for Ottawa to be back in budget surplus by now. That target has since been pushed back to 2015-16. By the time the books are balanced, seven successive years of deficits will have increased the federal debt from $458-billion in 2008-09 to $620-billion.

(i) Article 1:

(a) Explain how the government spending has helped the Canadian economy. Use the Y=AE diagram to illustrate your answer (2 marks).



Ans: The increase in G will shift the AE up, bring the short-run Y back to Yp, from point a to point b.

(b) Explain in words whether the following will increase or decrease the effectiveness of the government spending in stimulating the Canadian economy:

- Canadians have a low marginal propensity to save (2 marks);

Ans: Increase, because if MPC is low, for each $1 that The Plan injects, consumers spend a large fraction and save a small fraction. The multiplying effect will be large.

- Canadians like to spend a high portion of their income on imports (2 marks);

Ans: Decrease, because if MPM is high, for each $1 that The Plan injects, consumers spend a large fraction of their income on importing goods and services. The amount of output produced domestically will be small. The multiplying effect will be small.

- Canadians' demand for money is highly sensitive to income changes (2 marks), and

Ans: Decrease, because for each $1 that The Plan injects, Y rises, and this will increase money demand. If money demand rises a lot for a small change in Y, then interest rates will rise a lot. This will decrease private investment spending a lot and the net Y will increase by just a bit.

(c) Article 1 states that the federal debt in Canada is expected to rise from $458 billion to $620 billion by the time the government returns to a balanced budget. Provide two reasons why its debt could be much lower than $620 billion by that time (2 marks).

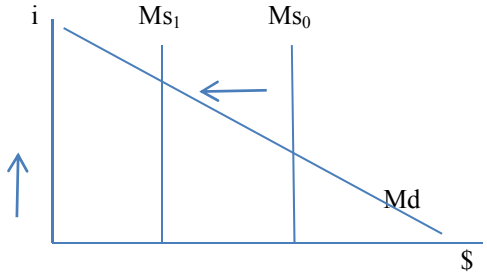
Ans: Yp may increase due to the increase in spending by The Plan (if the spending affects education, technological development, etc.), labour force may rise and Yp may rise due to The Plan (increase the likelihood of finding jobs, so discouraged workers re-enter the labour force), interest rates may fall (decreases interest payments on debt), etc.

Article 2: Fed to start withdrawing stimulus from U.S. economy
CBS News, December 18, 2013

That's the message from Federal Reserve officials, who announced Wednesday that the central bank will start gradually withdrawing the extraordinary monetary support it has provided for the U.S. economy since the financial crisis erupted in 2008.

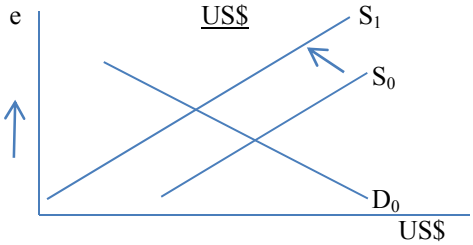
(ii) Article 2: After more than five years of monetary stimulus, it may be time reverse the trend.

(a) Explain how the US Federal Reserve (the Fed) can operate through open market operations to withdraw the monetary support. Using the money demand/supply diagram for the US, illustrate the effects of this decision. For simplicity, assume that the Fed targets the money supply rather than the interest rate (2 marks).



Ans: The Fed wants to withdraw monetary stimulus, so it needs to decrease money supply. It can sell bonds in the open market, collect the money the bond sales, and remove the money from the economy. As the supply of bonds rises, the price of bonds fall and interest rates will rise.

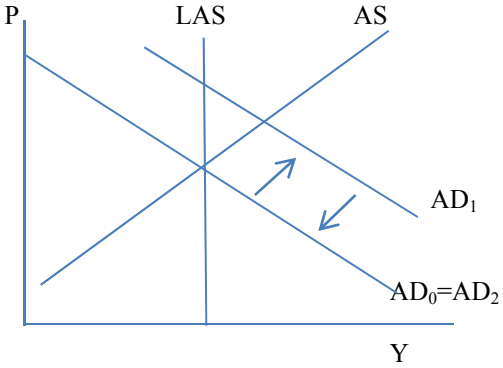
(b) Suppose Canada has a flexible exchange rate system: Use the foreign exchange market diagram to explain why the Canadian dollar will depreciate. Also explain how Canada's balance of payments components will be affected by the US's policies (4 marks).



Ans: Since the supply of US$ decrease in the US and in the world, the value of US$ rises relative to the value of the C$, so the C$ depreciates against the US$ → e rises, Canadian exports cheaper, imports more expensive → Canadian NX rises, CA rises, KA falls, and ΔORT=0 → ΔCA= - ΔKA → BP=CA+KA=0.

Note: If students answer that since $i_{us}>i_c$, so demand for US$ rises, demand shifts up, C$ depreciates, e rises, also OK.

(c) Use the AD/AS/LAS diagram to illustrate the effects on Canadian GDP and price level. Suppose the Bank of Canada wants to keep the price level constant (or inflation rate constant). What should it do? Define SPRA and SRA and explain which of these two tools it should use (4 marks).

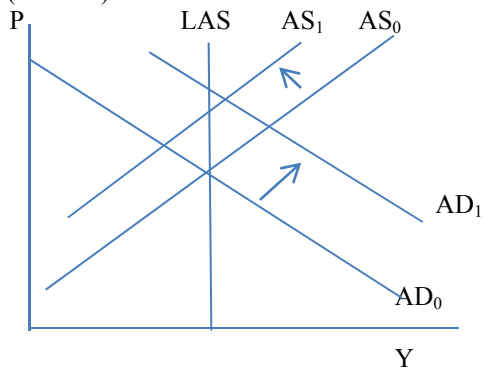


Ans: The depreciation of the C$ will shift AD to the right, leading to a stronger Y and higher P. The BOC can raise the target overnight interest rate to decrease investment expenditure and shift the AD back to its original position. SRA = sale and repurchase agreements, drains cash from banks; SPRA= special purchase and resale agreement, injects cash into banks; Likely to conduct SRA; overnight interest rates will rise.

Article 3: Air Canada (and West Jet) may hike fares, fees due to low dollar
CBC News, Mar 07, 2014

Air Canada is considering new fees and fare increases to make up for a weaker Canadian dollar, Air Canada CEO Calin Rovinescu has told Bloomberg news service. The lower Canadian dollar has hurt the profits and output of both Air Canada and West Jet airlines.

(iii) Article 3: Explain in words and use the AD/AS/LAS diagram to illustrate why a depreciation of the Canadian dollar may increase or decrease Canadian GDP. *[Hint: Keep in mind that our airlines use both Canadian Bombardier jets as well as American Boeing jets]* (5 marks).



Ans: The depreciation of the C$ is likely to increase the competitiveness of our exports because our currency is cheaper for foreigners to buy. As a result, the AD curve shifts up. However, if Canadian firms also import inputs, in this case our airlines buy the planes from US companies, the depreciation in the C$ will increase our production costs. This increase in cost will shift our AS to the left. In total, we cannot readily conclude whether the depreciation in the C$ will increase, decrease or even leave our overall GDP unchanged.

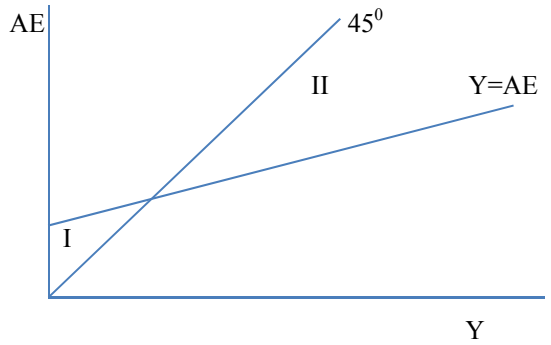
Article 4: Canadian economy beats forecasts but analysts see 'mixed bag'
The Globe and Mail, Feb. 28 2014

Shaking off a storm-battered December, the Canadian economy managed to grow at a better-than-expected 2.9-per-cent annual pace in the final three months of the year. And it was faster than the 2.7-per-cent growth recorded in the third quarter.

But economists were quick to point out that the Canadian economy's performance isn't quite as impressive when you unpack the details. Building up of inventories contributed about half the growth, with debt-burdened households doing much of the rest.

(iv) Article 4:

(a) Explain why an accumulation of inventories is an unimpressive source of economic growth. Use the Y=AE diagram to support your answer (3 marks).



Ans: Because inventory accumulation is the main source of economic growth, the economy is currently operating in region II. This means Y>AE. The firms have produced a lot of output but have not sold such output. This output is currently being held as inventory. When firms realize that they have a lot of output not being sold, they will cut back their production subsequently, so Y will fall. Graphically, we will move from region II back to the intersection of Y=AE on the 45^0 line. In other words, this increase in Y is temporary because firms will cut back on Y eventually.

(b) Explain why debt-burdened household expenditure is also an unimpressive source of economic growth (2 marks).
Ans: Households will eventually have to cut back their consumption in order to pay back debt. Such current high levels of consumption are temporary and are not sustainable in the long run. Also, any increase in interest rates will also lead to widespread bankruptcy, which will create a recession.

Article 5: China's reliance on coal reduces life expectancy by 5.5 years, says study
The Guardian, July 8, 2013

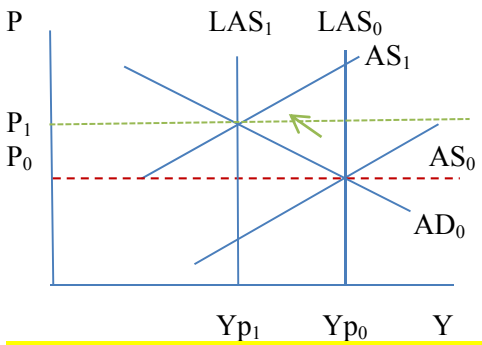
High levels of air pollution in northern China – much of it caused by an over-reliance on burning coal for heat – will cause 500 million people to lose an aggregate 2.5 billion years from their lives, the authors predict in the study, published in the journal the Proceedings of the National Academy of Sciences.

(iv) Article 5:

(a) Write down the equation for total $\%\Delta Y_p$ (not per-capita) and explain to which component this article is referring (2 marks).
Ans: $\%\Delta Y_p = \%\Delta A + \%\Delta N + \%\Delta K$, and this fall in life expectancy is referring to the fall in the size of the labour force, N.

(b) Explain the concept of constant returns to scale and how per-capita Y will be affected in this case (2 marks).
Ans: CRS means if inputs are scaled by a number, output will change by the same scale. For example, if both labour and capital inputs are halved, then output will also be halved. To maintain CRS, if the labour force shrinks by 10%, the capital stock also has to shrink by 10% in order to maintain a constant per-capita Y. If the capital stock does not change, the per-capita Y will rise.

(c) Use the AD/AS/LAS diagram to show how this news would affect China's long run inflation rate (2 marks).



Ans: The smaller labour force will shift AS to the left in the short run. Since the shrinkage in N is permanent, eventually the LAS will also shift to the left. Without any changes in AD, the price level will be higher. This is due to the loss in labour input, thereby raising wages, and increasing production costs for firms. China will experience a higher price level or higher inflation rates in the long run.

(d) Referring to the equation for total $\%\Delta Y_p$ (not per-capita), describe two policies that the Chinese government can adopt in order to keep Y_p constant (4 marks).
Ans: Any two of - Increase technological development "A" to compensate for the loss in "N", decrease the legal working age in order to increase "N", increase the official retirement age to increase "N", increase K to compensate for the loss in "N", etc.

The End…Have a Great Summer!