

**Concordia University
Department of Economics**

ECON 203, EC – INTRODUCTION TO MACROECONOMICS

Summer 2016

FINAL EXAMINATION (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),
 - (iv) Part IV: Multipart 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. A bakery sells its monthly output for \$26,000. It pays \$12,000 in wages to its workers, \$4,000 in rent and \$4,000 to its suppliers for materials, such as flour, sugar and oil. Its profit is \$6,000. What is the bakery's value added?
 - A) \$6,000.
 - B) \$14,000.
 - C) \$20,000.
 - D) \$22,000.**
 - E) None of the answers is correct.

2. Which of the following is (are) CORRECT?
 - A) A discouraged worker is no longer in the population.
 - B) A lump-sum tax has no effect on the goods market multiplier.**
 - C) The unemployment rate associated with Y_p is the frictional unemployment rate.
 - D) Consumer Price Index tends to underestimate the true rise in the cost of living.
 - E) All of the answers are correct.

3. Suppose the government raises its revenue by a net tax of 25% on income, $t = 0.25$, the marginal propensity to consume out of disposable income is 0.8, and the government has an outstanding public debt of 1,500. The autonomous expenditure is $(C_0 + I_0)$ is 600 and government expenditure is 400. What is the debt to GDP ratio?
 - A) 16%.
 - B) 30%.
 - C) 50%.
 - D) 60%.**
 - E) 67.5%.

4. An equilibrium income in an open economy with government occurs when:
 - A) Private saving equals investment ($S_p = I$).
 - B) Private saving equals investment, and tax revenue equals government spending ($S_p = I$ and $T = G$).
 - C) Private savings minus investment plus tax revenue minus government spending equal zero $[(S_p - I) + (T - G) = 0]$.
 - D) Private savings minus investment equals tax revenue minus government spending $[(S_p - I) = (T - G)]$.
 - E) None of the answers is correct.**

5. Monetary base or "High-powered" money may best be described as:
 - A) Always being larger than Money Supply.
 - B) The reserves of the Bank of Canada.
 - C) Cash held by the public and reserves of the commercial banks.**
 - D) Loans issued by commercial banks.
 - E) All of the answers are correct.

6. A firm produces consumer goods and adds some to inventory in the third quarter of a given year. In the fourth quarter the firm sells the goods at a retail outlet that leaves its inventory diminished. As a result of these actions, what component(s) of GDP change in the fourth quarter?
 - A) Only investment and it decreases.
 - B) Only consumption and it increases.
 - C) Investment decreases and consumption increases.**
 - D) Investment increases and consumption decreases.
 - E) Consumption, investment and GDP increase.

7. Other things remaining the same, if households suddenly decide to save more regardless of the level of income, then the consumption function will ____ and the goods market multiplier will ____.
- Become steeper because the marginal propensity to consume (MPC) falls; fall.
 - Remain unchanged but the savings function will shift downward; fall.
 - Become flatter because the marginal propensity to save (MPS) rises; rise.
 - Make a parallel shift downward as autonomous consumption expenditure falls; fall.
 - Make a parallel shift downward as autonomous consumption expenditure falls; remain constant.
8. How does an economy self-adjust to a recessionary/contractionary gap?
- The AS curve shifts to the left and the AD curve shifts to the right until the gap is closed.
 - The AS curve shifts to the right and the AD curve remains the same until the gap is closed.
 - The AD curve shifts to the right and the AS curve remains the same until the gap is closed.
 - The AD curve shifts to the left and the AS curve shifts to the right until the gap is closed.
 - Potential output will decrease until the gap is closed.
9. Deposits accepted by banks are _____ of these banks.
- Assets
 - Reserves
 - Liabilities
 - Money multipliers
 - Both B and C are correct.
10. If Canadian's GNP is higher than its GDP, then:
- Income from Canadian investments abroad is less than the income paid to foreigners for their investments in Canada.
 - Income from Canadian investments abroad is more than the income paid to foreigners for their investments in Canada.
 - Income from Canadian investments abroad is equal to the income paid to foreigners for their investments in Canada.
 - Canada's net exports must be positive.
 - Canada's net exports must be negative.
11. If changing money market conditions result in an interest rate higher than the equilibrium rate, then:
- Portfolio managers will sell bonds and thus reduce the money balances in their portfolios.
 - Portfolio managers will sell bonds and thus increase the money balances in their portfolios.
 - Portfolio managers will buy bonds and thus reduce the money balances in their portfolios.
 - Portfolio managers will neither buy nor sell bonds and will keep the same mix of money balances and bonds in their portfolios.
 - None of the answers is correct.
12. If the banks' desired reserve ratio (rr) is 2.5% and the public's currency ratio (cr) is 7.5%, an increase in monetary base (MB) of \$1,000 will result in:
- A decrease in deposits of \$1,000 and an increase of \$750 in the public's cash holdings.
 - A decrease in deposits of \$10,000 and an increase of \$7,500 in the public's cash holdings.
 - An increase in deposits of \$1,000 and an increase of \$75 in the public's cash holdings.
 - An increase in deposits of \$10,000 and an increase of \$750 in the public's cash holdings.
 - None of the answers is correct.
13. If funds in the overnight loans market are trading above the overnight rate target, then the Bank of Canada will _____ to _____ and _____ the overnight market rate.
- Conduct a SRA; increase the monetary base; push down
 - Conduct a SRA; decrease the monetary base; push up
 - Conduct a SPRA; increase the monetary base; push down
 - Conduct a SPRA; decrease the monetary base; push up
 - None of the answers is correct.

14. Suppose that the government increases spending by 20% and increases autonomous or lump sum taxes by 20%.
 A) This will have a contractionary effect on the level of GDP.
 B) This will have an expansionary effect on the level of GDP.
 C) This will have no effect on the level of GDP.
 D) This will make the AE function flatter.
 E) Both C and D are correct.
15. 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 real GDP of the economy on the basis of this information.

Part II: Conceptual Questions (Total=30 marks).

Questions 16–18 refer to the Aggregate Expenditure Model

16. In the short run AE model, the AS curve is _____ because the _____ is fixed.
 A) Vertical; price level
 B) Vertical; technology level
 C) Upward-sloping; capital stock
 D) Upward-sloping; labour force
 E) None of the answers is correct.
17. In the short run AE model, if $Y > AE$, then _____.
 A) The price level will increase
 B) The price level will decrease
 C) Unplanned inventory will increase
 D) Unplanned inventory will decrease
 E) Both B and C are correct.
18. In the short run AE model, if the central bank increases interest rates, then net exports will _____, the aggregate _____ will shift _____, and short-run equilibrium output will _____, and potential output is _____.
 A) Increase; demand; right; increase; increase
 B) Increase; supply; right; increase; unchanged
 C) Decrease; demand; left; decrease; decrease
 D) Decrease; supply; left; decrease; unchanged
 E) Decrease; demand; left; decrease; unchanged

Questions 19–21 refer to the Marginal Propensity to Save

19. Which of the following is (are) CORRECT about the marginal propensity to save (MPS)?
 A) Both savings levels and the MPS can be negative at very low levels of Y .
 B) The MPS is equal to zero at the intersection of the AE curve and the 45-degree line.
 C) If the MPS is low, short run Y is likely to experience small fluctuations.
 D) If the MPS is low, this country is likely to run a capital account (KA) surplus.
 E) Only B and C are correct.

20. Which of the following is CORRECT about the marginal propensity to save (MPS)?
 A) If the MPS is low, crowding-out effects are likely to be high.
 B) If the MPS is low, monetary policy is more effective in affecting GDP.
 C) If the MPS is low, this country is likely to run a balance of payments surplus.
 D) If the MPS is low, capital stock accumulation is likely to be high.
 E) None of the answers is correct.
21. In the short run, the lower the MPS, the ___ is the AE curve and the ___ is the short run Y. In the long run, the lower the MPS, the ___ is the growth rate in potential GDP.
 A) Steeper; higher; lower
 B) Steeper; higher; higher
 C) Steeper; lower; lower
 D) Steeper; lower; higher
 E) Flatter; higher; lower

Questions 22–24 refer to the Canada’s Unemployment

22. Canada’s natural rate of unemployment in the past 10 years has been approximately _____.
 A) 3%
 B) 7%
 C) 10%
 D) 12%
 E) 15%
23. 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 A and B are correct.
 E) Only B and C are correct.
24. 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.

Questions 25-27 refer to Flexible and Fixed Exchange Rates

25. Suppose Canada has a flexible exchange rate system. Our Canadian dollar floats against the US dollar. If the US Federal Reserve Banks (central banks) raise US interest rates, this implies that our Canadian dollar is likely to _____ against the US dollar and our net export is likely to _____.
 A) Appreciate; improve
 B) Appreciate; deteriorate
 C) Depreciate; improve
 D) Depreciate; deteriorate
 E) None of the answers is correct.

26. Continue with the previous question: Now suppose Canada has a fixed exchange rate against the US dollar. As the US interest rates rise, the Bank of Canada (BOC) has to ____ Canadian dollar, our money supply will ____.
- A) Buy; rise
 - B) Buy; fall**
 - C) Sell; rise
 - D) Sell; fall
 - E) Sell; remain constant
27. Suppose Canada operates under a fixed exchange rate system and the Canadian dollar is fixed or pegged against the US dollar. If Canada's current account has a value of -US\$50 and capital account has a value of \$40, then the BOC will have to ____ US dollars. The BOC will ____ US dollar reserves.
- A) Buy; accumulate
 - B) Buy; deplete
 - C) Sell; accumulate
 - D) Sell; deplete**
 - E) None of the answers is correct.

Questions 28–30 refer to Interest Rate Parity

28. According to interest rate parity, if the interest rate offered by a home asset is $i_H=8\%$, the interest rate offered by a foreign asset is $i_F=9\%$ and the current spot exchange rate is $e_t=2$ (from home's perspective, that is, the price of one unit of the foreign currency is equal to 2 units of the home currency), what is the **expected** future nominal exchange rate e_{t+1} ?
- A) 1.85.
 - B) 1.98.**
 - C) 2.15.
 - D) 2.20.
 - E) 2.40.
29. Continue with the previous question: The value of the home currency is expected to ____
- A) Depreciate by 1.0%.
 - B) Depreciate by 2%.
 - C) Depreciate by 15%.
 - D) Appreciate by 1%.**
 - E) Appreciate by 20%.
30. Continue with the previous question: Suppose the **actual** future nominal exchange rate e_{t+1} turns out to be higher than what you have calculated in Question #28. If you had already bought the foreign asset, you will ____ this mistake. Your purchase of this foreign asset has been measured as a ____ value in Canada's capital account.
- A) Lose from; positive
 - B) Gain from; positive
 - C) Lose from; negative
 - D) Gain from; negative**
 - E) None of the answers is correct

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

Questions 31–35 refer to the Taylor Rule

The Taylor rule states that a central bank can monitor price stability (low inflation) and output stability (GDP being close to the potential output Y_p , implying zero output gap) by an equation that links the interest rate with these two objectives. For Canada, suppose this has been estimated to be as follows: $i = i_0 + 1.2(\pi - \pi^*) + 0.5(Y - Y_p)$.

For this question, suppose the following:

- the inflation target is $\pi^* = 2\%$
- the equilibrium rate of interest that is compatible with the inflation target and zero output gap is $i_0 = 8\%$.
- the level of inflation π changes with the changes in interest rate according to the following formula: $\pi = \pi^* - 1.5\Delta i$.

31. The initial value of i is ____.
- A) 7%
B) 8%
 C) 9%
 D) 10%
 E) 11%
32. Now suppose a drop in investment confidence leads to an output gap of $(Y - Y_p) = -6\%$. According to the Taylor rule, and putting aside inflation rates for now, the central bank should set a new i of ____.
- If $\pi = \pi^* - 1.5\Delta i$, the new inflation rate will be equal to ____.
- A) 4%; 8.0%
B) 5%; 6.5%
 C) 6%; 5.0%
 D) 7%; 3.5%
 E) 8%; 2.0%
33. The central bank knows that the inflation rate will change. Replace the expression for π shown above (that links π to the change in interest rate) into the Taylor rule and solve for the new interest rate that will now combine the anticipated increase in inflation as well as the output gap. ? [Hint: Solve the new i as an unknown]. What is the new interest rate that the BOC should set?
- A) 4.82%.
 B) 5.28%.
 C) 5.95%.
D) 6.93%.
 E) 7.84%.
34. Continue with the previous question: What is the new π value?
- A) 1.88%.
 B) 2.27%.
 C) 2.88%.
D) 3.61%.
 E) 3.67%.
35. Compare your new interest rate with $i_0 = 8\%$: In order for the interest to change, the BOC has to ____ bonds in the open market and ____ the monetary base.
- A) Buy; increase**
 B) Buy; decrease
 C) Sell; increase
 D) Sell; decrease
 E) Sell; keep constant

Questions 36–40 refer to Fiscal and Monetary Policies

A simplified economy is specified as below, with all values in billions of C\$:

Consumption expenditure:	$C = 250 + 0.9(Y-T)$	(Net) Taxes	$0.3Y$
Investment expenditure:	$I = 350$	Exports:	200
Government expenditure:	$G = 400$	Imports:	$0.13Y$

36. What is equilibrium Y ?
- A) 2,000.
B) 2,400.
 C) 3,000.
 D) 3,500.
 E) None of the answers is correct.
37. The spending multiplier is equal to ____ and the budget balance (BB) is equal to ____.
- A) 1.28, 61
B) 2.00, 320
 C) 4.16, 1,000
 D) 4.35, 1,166
 E) 6.25, 1,850
38. Suppose that potential Y_p is equal to \$3,200. What is the change in G that is required to close this output gap and what is the new BB?
- A) \$150.0; \$410
 B) \$200.0; \$360
C) \$400.0; \$160
 D) \$800.0; -\$240
 E) \$1,000.0; -\$440
39. Continue with the previous question: Suppose the government can also choose to change taxes in order to close the output gap. In this case, the government should ____ taxes and the amount of tax changes will be _____ the amount of change in G you have found in the previous question.
- A) Cut; larger than**
 B) Cut; equal to
 C) Raise; larger than
 D) Raise; equal to
 E) Raise; smaller than
40. Instead of fiscal policies, the central bank of the country can use monetary policies to close the output gap. This central bank should ____ its target overnight interest rates by _____ bonds and letting its currency_____.
- A) Increase; buying; depreciate
 B) Increase; selling; appreciate
 C) Increase; buying; depreciate
D) Decrease; buying; depreciate
 E) Decrease; selling; appreciate

Questions 41–45 refer to Real Exchange Rates and PPP

Suppose that in 2003, the price levels in the United States and Canada were 100. By 2007, the price level in the United States has increased to 170, while the price level in Canada has risen to 230. Suppose the nominal exchange rate between the two countries in 2003 was US\$1 = C\$1.5. Round all numerical answers to two decimal places, if applicable

41. What was the 2003 real exchange rate, from Canada's perspective?
- A) 0.67.
 - B) 1.25.
 - C) 1.50.**
 - D) 1.72.
 - E) None of the answers is correct.
42. What must be the new nominal exchange rate in 2007 if the real exchange rate had remained constant at the 2003 level (from Canada's perspective)?
- A) 0.95.
 - B) 1.55.
 - C) 1.62.
 - D) 1.78.
 - E) 2.03.**
43. If Canada had fixed its nominal exchange rate against the US dollar at the 2003 level, Canada would have experienced a real exchange rate ____ because its real exchange rate would be equal to ____.
- A) Appreciation; 1.11**
 - B) Appreciation; 1.22
 - C) Appreciation; 1.33
 - D) Depreciation; 1.11
 - E) Depreciation; 1.22
44. Continue with the previous question: Because the Canadian dollar is _____, our Canadian exports are becoming _____ over the years and Canada is likely to be experiencing _____.
- A) Undervalued; cheaper; an inflationary gap.
 - B) Undervalued; more expensive; a recessionary gap.
 - C) Overvalued; cheaper; an inflationary gap.
 - D) Overvalued; more expensive; a recessionary gap.**
 - E) Correctly valued; neither more expensive nor cheaper; full employment.
45. If Purchasing Power Parity holds, the correct (flexible) nominal exchange rate in 2007 should be equal to _____.
- A) 0.80.
 - B) 1.35.**
 - C) 1.50.
 - D) 1.65
 - E) 1.80.

Questions 46–48 refer to Money Creation and Money Supply

46. Suppose that you have received \$550 (cash) in dividends from your investment abroad. You can put some of this money into a bank account that you have with BMO as well as hold a fraction of this money as cash for transaction purposes. Suppose your currency drain ratio of 10% or 0.1 and the BMO has a reserve ratio of 20% or 0.2. What is the amount of deposits that the BMO will receive from you?
- 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) 4.33
48. Continue with the previous question: The new money supply is equal to ____.
- A) \$1,468.5
 - B) \$1,831.5
 - C) \$2,018.5**
 - D) \$2,304.5
 - E) \$2,381.5

Questions 49–51 refer to Open Market Operations

The demand for money is given as $M_d = 2,000 - 100i$, where M_d 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 (there is no currency drain) and that all commercial banks have a reserve ratio equal to 40%.

49. What is the equilibrium interest rate?
- A) 9 percent.
 - B) 10 percent.
 - C) 11 percent.
 - D) 12 percent.
 - E) 13 percent.**
50. What amount of bonds (in \$) should the Bank of Canada sell or buy if it wants the interest rate to be 18 percent?
- A) It should sell \$200 billion.**
 - B) It should buy \$200 billion.
 - C) It should sell \$350 billion.
 - D) It should buy \$350 billion.
 - E) None of the answers is correct.
51. Continue with the previous question: Which of the following is (are) CORRECT?
- A) The price of bonds will fall.**
 - B) The money supply will rise.
 - C) The currency of this country will depreciate.
 - D) The money multiplier will rise.
 - E) Only A, B and C are correct.

Questions 52–53 refer to Labour Market

Consider the following data collected from a country:

Total population	700
Population under 15 years of age	110
Not in the labour force	220
Unemployed	95
Part-time workers looking for full-time jobs	30

52. What is the size of the labour force?
 A) 270.
 B) 380.
 C) 420.
 D) 530.
 E) None of the answers is correct.
53. What is the unemployment rate? What is the employment rate?
 A) 13.3%; 54.4%
 B) 15.0%; 53.3%
 C) 17.5%; 51.7%
 D) 25.7%; 46.6%
 E) 32.8%; 42.1%

Questions 54–55 refer to GDP Growth Accounting and the Solow Residual

Suppose you have the following information about an economy:

Average annual growth rates from 1995 to 2005:

- (i) Potential GDP: 5.12%
- (ii) Labour force: 1.8 %
- (iii) Capital stock: 1.5%

Share of labour income in national income: $\frac{2}{3}$. Round all answers to two decimal places, if applicable.

54. What is the contribution of the labour force to the potential GDP growth?
 A) 1.0%.
 B) 1.2%.
 C) 1.8%.
 D) 2.7%.
 E) None of the answers is correct.
55. What is the growth in productivity as measured by the Solow growth residual?
 A) 1.52%.
 B) 2.85%.
 C) 3.23%.
 D) 3.42%.
 E) None of the answers is correct.

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

The first half of 2016 has been marked by major events, both internal and external, that foreshadow major economic changes for Canada and the World. For this multi-part question, we will examine how these shocks might affect the Canadian economy and what could be done to avoid adverse effects.

Article 1: Farmers hope Mexico beef deal will steer Canada into other markets

Michelle Zilio, July 01, 2016 <http://www.theglobeandmail.com/news/alberta/farmers-hope-mexico-beef-deal-will-steer-canada-into-other-markets/article30731409/>

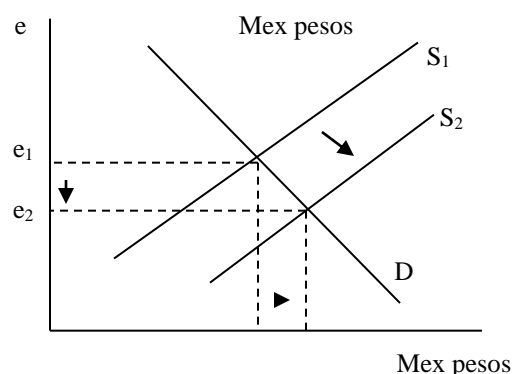
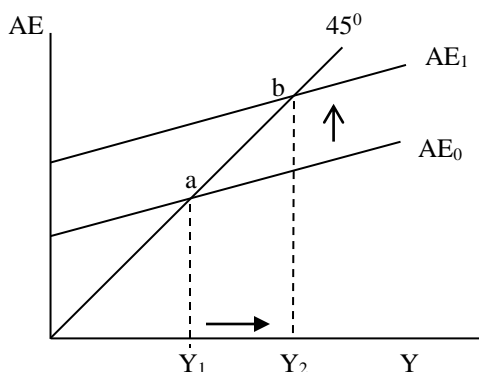
During a state visit in Ottawa on Tuesday, Mexican President Enrique Pena Nieto and Prime Minister Justin Trudeau announced that Mexico will fully open its market to Canadian beef in exchange for Canada ending visa restrictions on Mexican travelers.

The Canadian cattle industry says the decision will give beef producers a much-needed boost in Alberta and Western Canada, which have been hit hard by slumping oil prices. Mexico currently allows only Canadian beef products from animals younger than 30 months of age, but restrictions will be lifted on Oct. 1.

Cattle groups now want Ottawa to strike similar deals with other key markets, such as China and Taiwan, which have had restrictions on Canadian beef imports since an outbreak of mad cow disease, in 2003.

(i) Article 1:

- (a) Explain how the increase in exports of beef and the easing of travel restrictions offered to Mexicans will help the Canadian economy. Make an $Y=AE$ diagram on the left to illustrate your answer (2 marks).



Ans: The increase in exports of beef and tourism will shift the AE up, causing the short-run Y to increase, from point a to point b, and get closer to Y_p .

- (b) Assuming that the Canadian government strikes similar deals with other foreign markets (China and Taiwan):
- Explain what the impact will be on Canada's Current Account (CA) balance (2 marks);

Ans: CA balance will increase because the major part of it is the trade balance. If exports increase, the CA balance will be positively affected.

- Canada has a flexible exchange rate regime. Assuming that the exchange rate between Canada and Mexico is 1:1 (one Cdn dollar for 1 Mexican peso), show on the graph on the right and explain, from Canada's perspective, what the impact will be on the Canada/Mexico exchange rate and the value of the Canadian dollar from the increase in exports (2 marks);

Ans: An increase in the demand for Canadian beef will cause an increase in the demand for Canadian dollars and a simultaneous increase in the supply of Mexican pesos. The combined effect will result in an increase in the value of the Canadian dollar (the exchange rate will fall below 1:00).

- How is the Canadian Capital Account (KA) expected to be affected? What is the implication of it? (2 marks).

Ans: The Capital Account (KA) balance will decrease to match the increase in the Current Account (CA) balance. This implies that Canada will invest abroad (Mexico included).

- (c) If the Bank of Canada (BOC) wanted to leave the exchange rate at its previous level, what should the BOC do?(2 marks)

Ans: The BOC would intervene by increasing the supply of Canadian dollars and buying Mexican pesos, thus increasing its official reserves, as it accumulates pesos.

Article 2: Canada Q2 set to disappoint after economy grows 0.1 pct in AprilDavid Ljunggren, June 30, <http://www.reuters.com/article/canada-economy-idUSL1N19M0JY>

The Canadian economy grew by just 0.1 percent in April from March, Statistics Canada said on Thursday, paving the way for a weak second quarter on the back of the devastation caused by major wildfires in Alberta.

The positive step - the first in three months - matched the forecast in a Reuters poll of analysts.

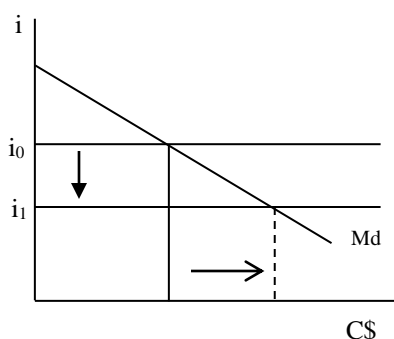
The Bank of Canada, citing the damage the fires did to the energy sector, said on June 15 that growth was likely to be flat or slightly negative in the second quarter before an outsized recovery took hold in the third quarter.

That forecast could now be in doubt, given the economic fallout from Britain's stunning vote last week to leave the European Union

The central bank, which cut rates twice last year to counter the effects of a slump in crude prices, will provide updated economic forecasts at its next interest rate decision on July 13 and is widely expected to leave rates unchanged

(ii) Article 2:

- (a) Assume that the BOC wants to cut its key interest rate. Explain in words and use the money demand/money supply diagram to demonstrate how this can be accomplished. (Hint: Since the BOC is focused in interest rates the money supply is horizontal). Also explain how bond prices will be affected (3 marks).



Ans: To lower the target Overnight Lending Rate, the BOC can inject money into the financial market through Open Market Operations (by buying bonds and assets of the banks and in return pump the banks with cash). This will push down interest rates and push up bond prices.

- (b) Continue with part (a). The Overnight Lending Rate (OLR) is right now 0.5%. Explain how far down the BOC could go with the rate reduction. (2 marks).

Ans: The lowest that the ORL can be is 0.25%.

- (c) Now assume that the BOC wants to leave the rates unchanged. However, due to Brexit uncertainty (Brexit= Britain's vote to exit the EU), there is weakness in the market that translates into pressures to lower the rates. Define SPRA and SRA. **Explain briefly** which tool the BOC is more likely to use to fend off downward pressures and maintain the rates unchanged (3 marks).

Ans: To maintain the OLR at the desired level, the BOC may have to intervene in the overnight money market. The BOC can conduct: (a) SPRA, special purchase and resale agreements, by buying assets from commercial banks for one night, inject them with money, and then sell them back the assets the following day, which is equivalent to increasing money supply and reducing interest rates; or (b) SRA, sale and repurchase agreements, which corresponds to the BOC selling bonds to banks and buying them back the next day. This is equivalent to decreasing money supply and raising interest rates. Since there are downward pressures on rates, the BOC will have to use SRA.

- (d) Explain in words why a cut in the interest rate is likely to lead to a depreciation of the Canadian dollar and how Canada's current account and capital account will be affected (2 marks).

Ans: Lower Interest rates (returns) offered by Canadian assets that are lower than those offered by US assets will lead to a higher demand for US assets by Canadians and a higher demand for US\$ in order to buy US assets. This will lead to a higher value for the US\$ and relatively a lower value for the C\$. With a weaker C\$, our exports become cheaper and imports become more expensive, hence our current account improves ($\Delta CA > 0$). As more Canadians buy US assets, we have more capital outflow, and hence our capital account deteriorates or worsens ($\Delta KA < 0$).

Article 3: Trudeau government budgets for a better world

Adrian Wyld, March 22 2016, <http://www.thestar.com/opinion/editorials/2016/03/22/trudeau-government-budgets-for-a-better-world-editorial.html>

The budget that Finance Minister Bill Morneau unveiled on Tuesday delivers big-time on the Trudeau government's promise of moving toward a more ambitious, more generous and more equitable Canada. There's a lot more money for families with kids through transfers and tax cuts, for cities struggling to shore up crumbling infrastructure and launch new projects, for students and universities, and for people who lose their jobs in high-unemployment areas.

How to pay for all this is the \$29.4-billion question. That's where Morneau pegs the federal deficit for the 2016-17 financial year, keeping it a hair under the symbolic level of \$30 billion.

Morneau has mainstream economic opinion firmly on his side as he runs deliberately into the red. Bank economists, the Bank of Canada and the OECD agree that Canada's low debt burden and record-low interest rates mean Ottawa can afford to run deficits without getting into the kind of financial bind that led to painful cuts in the 1990s.

The concern isn't for now, or even for the next few years. More worrisome is that the government has no visible strategy for ever balancing the budget. Morneau says the government "remains committed to returning to balanced budgets," but gives no date for that. It looks like a wish, not a plan.

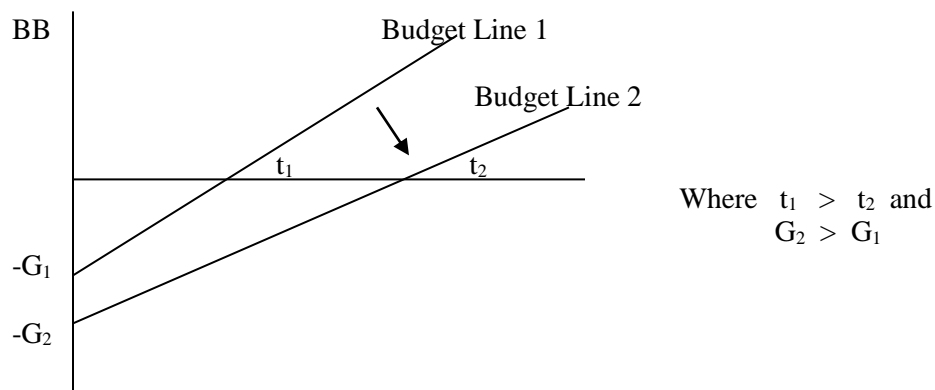
In the meantime, his new promise is to reduce Ottawa's debt-to-GDP ratio over the next five years. If he holds to that, all may come out well.

(iii) Article 3:

- (a) The 2016 federal budget plans for an increase in spending and a reduction of taxes. Write down the equation for the budget balance (BB) and explain what is the budget balance that the federal budget projects (2 marks).

Ans: $BB = t \cdot Y - G$. Given the budget's projections, the BB will be negative (deficit).

- (b) Draw the original budget line (before the budget changes). Show how the budget line will be affected by the new budget. Does Y have to be higher or lower for the new budget to balance? (3 marks).



Ans: The increase in G will shift the budget line downward. The lowering of tax rates will make the budget line flatter. Therefore the combined effect will be a downward shift but not in a parallel fashion.

- (c) Write down the equation of the structural budget balance (SBB). Will the SBB be affected? Is the type of fiscal policy implied by the budget automatic or discretionary? Explain (3 marks).

Ans: $SBB = t \cdot Y_p - G$. The SBB shows the government's stance at the potential output. Since both the government spending (G) and tax rate (t) are modified, then the SBB will too be affected irrespective of the size of Y_p . Changing G and/or t constitute discretionary fiscal policy.

- (d) The minister of finance promises to reduce the federal debt-to-GDP ratio in the next five years. How could it be possible to reduce the debt-to-GDP ratio, while registering budget deficits? Explain (2 marks)

Ans: The debt (numerator of the ratio) increases with deficits and the interest payments. The GDP is the denominator of the ratio. For the ratio to be reduced, the denominator has to grow faster than the numerator. This is possible to be done if the government deficit is used to finance investment projects that will help the GDP to grow faster and if interest rates paid on the debt are low as they are now or go lower.

Article 4: #WelcomeRefugees: Canada resettles Syrian refugees

Date Modified: 2016-06-21, <http://www.cic.gc.ca/english/refugees/welcome/>

The Government of Canada resettled 25,000 Syrian refugees between November 2015 and February 29, 2016. This included government-supported and privately sponsored refugees. Our commitment to resettling Syrian refugees to Canada is continuing in 2016.

Processing of both government-supported and privately sponsored Syrian refugees has never stopped and refugees have continued to arrive during the past few weeks with more scheduled to arrive in the weeks and months ahead at a measured pace.

For all privately sponsored Syrian applications submitted up to March 31, 2016, we plan to finalize processing by the end of 2016 or early 2017.

28,640 Syrian refugees have arrived in Canada so far.

(iv) Article 4:

- (a) Canada has opened its doors to Syrian refugees whose admission goes beyond the immigration plans. This increase of population will eventually lead to an increase of the labour force. Write down the equation for potential GDP growth to show how this policy will affect growth in potential GDP (2 marks).

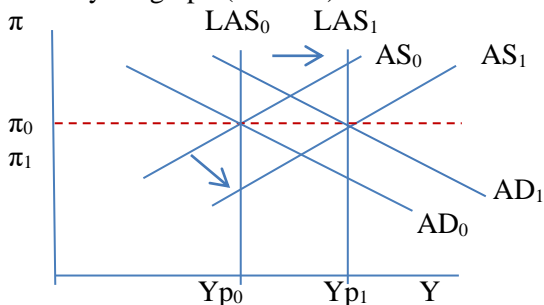
Ans: $\% \Delta Y_p = \% \Delta A + (1-\alpha) \% \Delta N + \alpha \% \Delta K$. The article says that N is rising. Therefore this will affect the potential GDP growth positively.

- (b) Explain the concept of constant returns to scale. According to this concept, what needs to happen in order for the Canadian GDP-per-capita ratio to remain constant (not to fall)? Explain how this can be accomplished (2 marks).

Ans: The concept of constant returns to scale says that if K and N grow at a certain rate, then GDP will grow at the same rate too. For per-capita GDP to remain constant, K and N have to rise by the same scale.

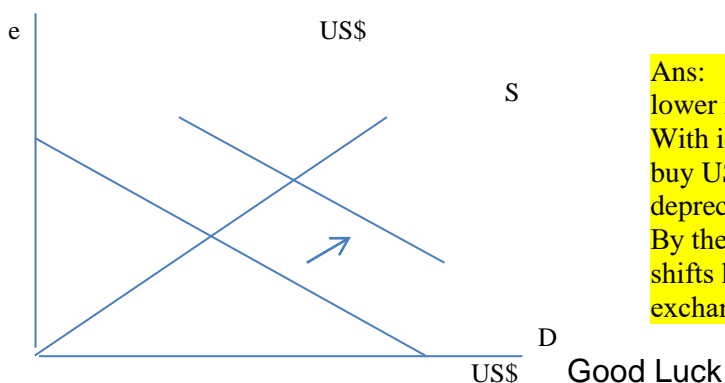
Therefore, the government needs to increase K by the same proportion as N. The government can encourage current savings in order to increase future capital accumulation.

- (c) Use the AD/AS/LAS diagram to demonstrate the effects on the Canadian economy. If the BOC wants to maintain the same price level (or same inflation rate), what does it have to do? Explain in words and show this in your graph (3 marks).



Ans: After the short run and long run AS curves shift to the right due to a larger labour force, on impact, the price level or inflation rate will fall. This violates the BOC's goal of maintain a constant inflation rate of around 2%. In order for the price level or inflation rate to rise, the BOC should encourage AD by cutting interest rates and increasing money supply. This will bring the economy back to the same inflation rate at the higher Y_p .

- (d) Use the foreign exchange diagram and explain what the consequences might be to the Canadian dollar based on solely the BOC's actions (3 marks).



Ans: As our OLR falls, our financial assets offer a lower rate of return compared to foreign (US) assets. With $i_c < i_{us}$, this will increase our demand for US\$ to buy US assets. Demand for US\$ shifts up, causing a depreciation in the C\$.

By the same token, the supply of foreign (US) dollars shifts leftward as less of them will be offered to be exchanged for Canadian dollars.