Concordia University
Department of Economics

ECON 203 – INTRODUCTION TO MACROECONOMICS

Winter 2015

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: 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. Suppose that in the economy of Spock, everyone is above the age of 15. Of these people, 100 have jobs, 15 are not working but are looking for work, and 10 do not work or seek work. The unemployment rate is ___ and working age population is _____.
   A) 6.98%; 125
   B) 8.7%; 140
   C) 12%;115
   D) 13.04%; 125
   E) 13.64%; 140

2. Which of the following is (are) CORRECT?
   A) Unanticipated inflation benefits borrowers.
   B) Consumer Price Index tends to underestimate the true rise in the cost of living.
   C) The natural rate of unemployment is always lower than the rate of frictional unemployment.
   D) In accounting, subsidies are added to wages, profits and indirect taxes to derive the final value of GDP.
   E) All of the answers are correct.

3. A firm produces consumer goods and adds some to inventory in the third quarter. 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 increases and consumption decreases.
   D) Investment decreases and consumption increases.
   E) Investment remains unchanged and consumption increases.

4. Which of the following statements is (are) CORRECT when interest rates rise?
   A) It becomes more expensive to borrow and fewer investment projects will be undertaken.
   B) It has no effect on investment if this person has all the money needed to start up his project.
   C) It is likely that the inflation rates in this economy will rise.
   D) It is likely that the currency of this economy will depreciate.
   E) Only A and B are correct.

5. An equilibrium income in an open economy with government occurs when:
   A) Current account = capital account = balance of payments (CA=KA=BP=0).
   B) Government expenditure = tax revenue (G=T).
   C) Private savings = investment (S=I).
   D) Private savings minus investment plus tax revenue minus government spending equal zero [(S-I)+(T-G)=0].
   E) Total leakages equal total injections.

6. If consumption is $50,000 when income is $75,000, and consumption increases to $60,000 when income increases to $100,000, the Marginal Propensity to Save is
   A) 0.2.
   B) -0.2.
   C) 0.4.
   D) -0.4.
   E) 0.6.

7. Which of the following do (does) NOT affect potential GDP, Yp?
   A) The level of consumer confidence.
   B) The size of the marginal propensity to import.
   C) The amount of money supply.
   D) The price level of goods and services.
   E) All of the above do not affect Yp.

8. 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.

9. Which of the following is NOT money?
A) Bills and coins.
B) Savings deposits.
C) Chequing deposits.
D) Credit cards.
E) All of the above are considered to be money.

10. Loans issued by banks are _____ of these banks.
A) Liabilities
B) Assets
C) Monetary base
D) Opportunity costs
E) None of the answers is correct.

11. The US Federal Reserves Banks (the Feds) have been scaling back their quantitative easing by cutting down the amount of bonds they purchase from the money markets. This means that US interest rates are going to ____ in the near future and that the Feds must believe that _____.
A) Rise; the US inflation rate has been falling
B) Fall; the US inflation rate has been negative
C) Rise; the US economy has been strengthening
D) Fall; the US economy has been weakening
E) Rise; the global economy has been weakening

12. Which of the following statements is (are) CORRECT in regards to the target overnight rates set by the Bank of Canada (BOC) ?
A) Bank rates are always higher than the target overnight rates.
B) The lowest possible target overnight interest rate that the BOC can set is zero.
C) The operating band is always plus and minus one-half of one percentage point from the target overnight rate.
D) Canadian laws dictate that when the BOC cuts or raises the target overnight rates, the commercial banks have to do the same with their mortgage and deposit rates.
E) All of the answers are correct.

13. Expansionary fiscal policies are ____ effective than monetary policies in affecting GDP under a flexible exchange rate because_____.
A) More; the currency will depreciate
B) More; the currency will appreciate
C) Less; the currency will depreciate
D) Less; the currency will appreciate
E) Fiscal and monetary policies are equally effective under a flexible exchange rate.

14. According to the Purchasing Power Theory, if the nominal exchange rate is C$1.1 for US$1, the consumer price index in the US is 105 and the consumer price index in Canada is 130, there will be an increase in demand for ____ goods and services, and eventually the price of US$1 will be equal to C$____.
A) US; 1.24
B) US; 1.55
C) Canadian; 1.182
D) Canadian; 1.43
E) Canadian; 1.55

15. If capital stock increases at the same rate as labour, then according to the concept of __, per capita output will ___.
A) Diminishing marginal product; stay constant
B) Diminishing marginal product; grow at the rate of the capital stock increase
C) Diminishing marginal product; grow at the rate of the labour supply increase
D) Constant returns to scale; stay constant
E) Constant returns to scale; grow at the rate of the capital stock increase

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 Canada's GDP and Unemployment

19. Based on your observations and study of economics, you know that:
A) Annual inflation in Canada in the past decade has averaged about 10 percent.
B) Canada has been without inflation, prices have been constant, for the past decade.
C) Annual inflation in Canada has averaged about 2.0 percent in the past decade.
D) Canada has experienced falling prices, a deflation, over the past decade.
E) None of the answers is correct.

20. Canada's natural rate of unemployment in the past 10 years has been approximately ____.
A) 3%
B) 7%
C) 10%
D) 12%
E) 15%

21. A rise in wage rates for labour without an increase in labour productivity will:
A) Increase nominal GDP with no change in real GDP.
B) Leave both real and nominal GDP unchanged.
C) Reduce both nominal and real GDP.
D) Increase both real and nominal GDP.
E) None of the answers is correct.

Questions 22–24 refer to the Fixed Exchange Rate System and Policy Responses

22. Suppose Canada operates under a fixed exchange rate system and the Canadian dollar is fixed or pegged against the US dollar. Due to an impending general election, suppose the Conservative government introduces new tax cuts, such as higher child care allowances, for Canadians. Also suppose that the money demand of Canadians depends on income and the interest rate. To maintain the fixed exchange rate, the Bank of Canada (BOC) would have to ____ bonds in the money market to ____ our interest rates.
A) Sell; increase
B) Sell; decrease
C) Buy; increase
D) Buy; decrease
E) The BOC would not have to intervene at all.

23. Suppose Canada operates under a fixed exchange rate system and the Canadian dollar is fixed or pegged against the US dollar. If the US Federal Reserve Banks increase their interest rates, the BOC will have to _____ Canadian interest rates. The Canadian dollar will ____ against other non-US currencies that operate under flexible exchange rates.
A) Increase; appreciate
B) Increase; depreciate
C) Decrease; appreciate
D) Decrease; depreciate
E) Do nothing to the; stay constant

24. 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 25–27 refer to Air Pollution and Economic Adjustments

25. Researchers from the University of Chicago, Harvard and Yale recently published a study that shows that due to air pollution, the life expectancy of 660 million Indians can be cut down by 3.2 years, for a total of 2.1 billion life years. Which of the following shifts will demonstrate this effect in the short run?
A) The AS curve will shift to the right.
B) The AS curve will shift to the left.
C) The AD curve will shift to the right.
D) The LAS curve will shift to the right.
E) The AD curve will shift to the right and the AS curve will shift to the left.

26. Continue with the previous question: In the long run, in the absence of any fiscal or monetary policy response, the ____ will shift to the ___ and the equilibrium price level will be ____.
A) AD; left; lower
B) LAS; right; lower
C) LAS; right; higher
D) LAS; left; lower
E) LAS; left; higher

27. Continue with the previous question: If the government of India wants to prevent any change in potential GDP, Yp, it should attempt which of the following?
A) Encourage higher savings rates.
B) Encourage lower savings rates.
C) Encourage balance of payments surplus.
D) Encourage balance of payments deficits.
E) Encourage more capital consumption allowance.

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 a unit of the foreign currency is H$2), 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 1.5%.
B) Depreciate by 2%.
C) Depreciate by 15%.
D) Appreciate by 20%.
E) None of the answers is correct.

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) by an equation that links the interest rate with these two objectives. For Canada, suppose this has been estimated to be as follows: $i = i_0 + 1.2(\pi - \pi^*) - 0.3(UR - UR_n)$, where the unemployment rate UR difference from its natural level substitutes for the output gap.

Suppose the inflation target is $\pi^* = 2\%$, the natural rate of unemployment is $UR_n = 7\%$, and the equilibrium rate of interest that is compatible with these two is $i_0 = 8\%$. Also, suppose that the level of inflation π changes with the changes in interest rate according to the following formula: $\pi = \pi^* - \Delta i$. Keep all answers to 2 decimal places.

31. Assume that we start with $\pi=\pi^*$ and $UR=UR_n$. What is the value of i?
A) 4%.
B) 5%.
C) 6%.
D) 7%.
E) 8%.

32. Now suppose a drop in investment confidence leads to an increase in Unemployment Rate to 8%. Let us put aside inflation rates for now. According to Taylor rule, what interest rate should the Bank of Canada now set?
A) 3.3%.
B) 4.4%.
C) 5.5%.
D) 6.6%.
E) 7.7%.

33. 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 increase in the unemployment rate. What is the new interest rate that the BOC should set?
A) 3.55%.
B) 4.88%.
C) 5.72%.
D) 6.85%.
E) 7.86%.

34. Following from the previous question: What is the new π value?
A) 1.45%.
B) 2.14%.
C) 3.33%.
D) 4.12%.
E) 5.67%.

35. Compare your new interest rate with $i_0 = 8\%$: For this change in the interest rate, the Bank of Canada has to ____ bonds through open market operations and the Canadian dollar is likely to ____ as a result.
A) Buy; appreciate
B) Buy; depreciate
C) Sell; appreciate
D) Sell; depreciate
E) Buy; stay constant

Questions 36–40 refer to Fiscal 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 = 150 + 0.8(Y-T)	Lump-sum constant taxes:	330
Investment expenditure:	I = 1,100 – 460*i*	Exports:	80
Government expenditure:	G = 330	Imports:	10

II. Money market, all M^d values are in billions of C$: Define interest rate *i* as 0.1, not 10.

Interest rate: *i* = 0.1 (which is 10%) Money demand: $M^d = 800 – 1{,}900i$

36. What is the equilibrium Y?
A) 4,250.
B) 5,000.
C) 6,700.
D) 7,200.
E) 8,800.

37. Suppose G rises to 440 because of increased expenditure on health services. What is the new equilibrium C?
A) 3,358.
B) 4,235.
C) 5,686.
D) 6,100.
E) 7,148.

38. As G rises from 330 to 440, round 1 dictates that ΔG=ΔY=110, or 110 units of health services will be created. Suppose these health services workers spend their new income on clothing following the consumption expenditure equation given above. Clothing workers will then spend their income on food as indicated by the consumption expenditure equation. This round 3 effect implies that ____ food will be produced. All of these workers pay ___ income taxes throughout these multiplier round effects.
A) 70.4; zero
B) 70.4; positive
C) 88; zero
D) 88; positive
E) 268.4; positive

39. Now consider monetary policies only. Suppose the BOC wants to cut interest rate *i* to 0.05 or 5%, with G still at 330. What is the new value of investment expenditure?
A) 1,077.
B) 1,105.
C) 1,179.
D) 1,258.
E) 1,345.

40. Given the new, lower interest rate, and G=330, what is the new equilibrium Y?
A) 3,265.
B) 4,225.
C) 5,575.
D) 6,815.
E) 7,015.

Questions 41–45 refer to Real Exchange Rates and Purchasing Power Parity:

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 160, while the price level in Canada has risen to 220. Suppose the nominal exchange rate between the two countries in 2003 was US$1 = C$1.7. Round all numerical answers to two decimal places, if applicable.

41. What is the 2003 real exchange rate, from Canada's perspective?
A) 0.85.
B) 1.35.
C) 1.70.
D) 2.10.
E) 2.25.

42. What is the new nominal exchange rate in 2007 if the real exchange rate had remained constant at the 2003 level (from Canada's perspective)?
A) 0.70.
B) 1.31.
C) 1.67.
D) 1.95.
E) 2.34.

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 ____.
A) Appreciation; 1.24
B) Appreciation; 1.38
C) Appreciation; 1.55
D) Depreciation; 1.80
E) Depreciation; 2.48

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

45. Continue with the previous question: In order to maintain the fixed exchange rate, the Bank of Canada will be ____ its US$ reserves. The Canadian dollar will eventually _____ under a flexible exchange rate system.
A) Depleting; appreciate
B) Depleting; depreciate
C) Accumulating; appreciate
D) Accumulating; depreciate
E) Accumulating; neither appreciate nor depreciate

Questions 46–47 refer to the GDP:

There are two industries in an economy, producing product A and product B. The table below are the quantities produced and the price per unit for two different years. Let Year 1 be the base year.

	Year 1	Year 2
Quantity of A (units)	8	5
Quantity of B (units)	9	12
Price of A ($/unit)	14	23
Price of B ($/unit)	17	18

46. What is the value of Year 2 real GDP?
A) $200.
B) $265.
C) $274.
D) $290.
E) $331.

47. What is the inflation rate in Year 2 (relative to Year 1)?
A) 14.25%.
B) 16.24%.
C) 20.80%.
D) 24.91%.
E) 28.22%.

Questions 48–50 refer to the Government Budget:

Suppose the government raises its revenue by a net tax of 35 percent on income, $t = 0.35$. The marginal propensity to consume out of disposable income is 0.85 and the marginal propensity to import is 0.2. Keep all answers to four decimal places.

48. The slope of the AE function is equal to _____.
A) 0.2975
B) 0.3525
C) 0.6475
D) 0.7025
E) 1.3333

49. The size of the multiplier is equal to _____.
A) 1.2222
B) 1.4235
C) 1.5444
D) 2.8369
E) 4.0404

50. In general, in the short run when the price level of goods and services is fixed, the higher the marginal tax rate, the ____ effective is fiscal policy in affecting GDP and the ____ is the ____ curve.
A) More; steeper; AE
B) More; flatter; AE
C) Less; steeper; AE
D) Less; flatter; AE
E) Less; steeper; AS

Questions 51–52 refer to the Money Demand:

Assume that the following data characterize a hypothetical economy: money supply = $200 billion; quantity of money demanded for transactions = $150 billion; quantity of money demanded as an asset = $10 billion at 13 percent interest, increasing by $10 billion for each 2-percentage point fall in the interest rate.

51. What is the equilibrium interest rate?
    A) 4%.
    B) 5%.
    C) 6%.
    D) 7%.
    E) 8%.

52. At the equilibrium interest rate, what is the quantity of money demanded as an asset?
    A) $30 billion.
    B) $35 billion.
    C) $40 billion.
    D) $45 billion.
    E) $50 billion.

Questions 53–55 refer to Potential GDP Growth:

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: 2/3.

53. What is the contribution of the labour force to the potential GDP growth?
    A) 1%.
    B) 1.2%.
    C) 1.8%.
    D) 2.7%.
    E) None of the answers is correct.

54. What is the contribution of the capital stock to the potential GDP growth?
    A) 0.5%.
    B) 0.6%.
    C) 0.7%.
    D) 0.8%.
    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) 3.51%.
    E) None of the answers is correct.

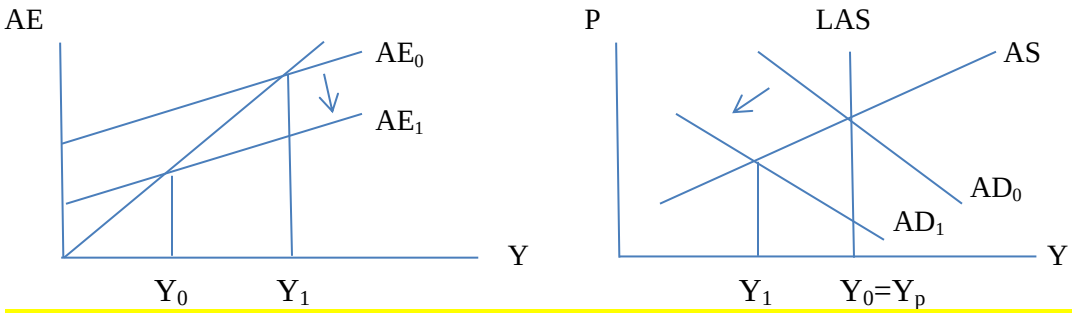
Part IV: Answer the following question. ANSWER ALL PARTS (Total = 40 marks).

The world price of crude oil dropped from US$100 per barrel in June 2014 to US$50 per barrel in December 2014. This question examines the effects and policy responses to this shock. Note that the quantity demanded for crude oil is not very sensitive to price changes. For example, a 50% fall in the price of gasoline may mean that we drive more, but less than 50% more. As a result, as the price of crude oil falls, Canada, a net exporter of crude oil, will earn **less** oil revenue. For simplicity, suppose the demand side of the Canadian economy responds very quickly and dramatically to this oil shock, while the supply side is very slow to respond.

> ***Article 1: 'There will be blood' in Canada from oil price collapse, JPMorgan warns***
> Feb. 02 2015, http://www.theglobeandmail.com/report-on-business/top-business-stories/oil-and-the-canadian-economy-there-will-be-blood/article22716555/
>
> A major U.S. bank is warning Canadians what to expect from the collapse in the oil market: "There will be blood." That warning from JPMorgan Chase & Co. is largely aimed at the province of Alberta, home to Canada's oil patch, but the collapse in oil prices will filter through the broader economy. The Wall Street giant, like others, suggests a recession in Alberta, with slower economic growth in other parts of the economy.

(i) Article 1:

(a) Suppose the fall in the price of crude oil has led to a dramatic fall in investment confidence in Canada very quickly, even before the supply side can react. Use the Y=AE diagram and the AD/AS/LAS diagram to illustrate the effects on the Canadian economy. Assume that Y=Yp before the oil price drop. Also explain in words the effects on the Canadian inflation rate and unemployment rate (4 marks).



Ans: Low investment confidence shifts AE down via lower autonomous spending; when goods and services prices become flexible, AD shifts inward; inflation rate drops (negative or falls) and the unemployment rate rises due to a lower short run Y.

(b) If you wish the negative effects on the Canadian economy to be minimized, which of the following would you wish to observe? Explain in words.

- Canadians to have a high or low marginal propensity to consume (2 marks)?

Ans: We want the goods market multiplier to be small so that the drop in investment confidence will lead to a small drop in Y. Therefore, we want a low MPC, which means a small multiplier.

- Canadians to have a high or low marginal propensity to import (2 marks)?

Ans: We want a high MPM so that the multiplier is small.

- Canadians to be taxed by a lump-sum income tax or by a *t* percentage of their income (2 marks)?

Ans: We want a percentage tax so that when Y falls, tY also falls, so that consumers pay less tax when their income falls.

- Canadians to have a money demand that is very sensitive or very insensitive to income changes (2 marks)?

Ans: Very sensitive such that when Y falls, money demand falls a lot, so that interest rates will fall a lot, which will help increase investment expenditure that is sensitive to interest rate changes.

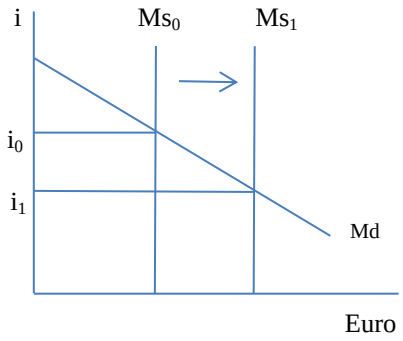
Article 2: Bank of Canada shocks markets with cut in key interest rate
Jan 22, 2015, http://www.cbc.ca/news/business/bank-of-canada-shocks-markets-with-cut-in-key-interest-rate-1.2921370

The Bank of Canada shocked markets Wednesday by cutting its key overnight lending rate by a quarter of a percentage point, citing the economic threat posed by plunging oil prices. The overnight rate, which moves down to 0.75 per cent, had been at one per cent since September 2010.

"The drop in oil prices is unambiguously negative for the Canadian economy," Bank of Canada governor Stephen Poloz said in a morning news conference.

(ii) Article 2:

(a) Explain how the Bank of Canada (BOC) should intervene in the money market through open market operations. Use the money demand/money supply diagram to illustrate your answer. Assume that the money supply is vertical. Also explain how bond prices will be affected (4 marks).



Ans: The BOC can inject money into the financial market by buying bonds and assets of the banks and in return pump the banks with cash. This will push down interests and push up bond prices.

(b) Continue with part (a): How should the BOC defend this new interest rate? Define SPRA and SRA. **Explain briefly** which tool is the BOC more likely to use (2 marks).
Ans: To maintain this lower ONR, BOC may have to intervene in the overnight money market to keep i from rising. The BOC can conduct 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. SRA stands for 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.

(c) Write down the equation for the money supply. Explain which variable(s) the BOC can control and which variable(s) the BOC cannot control (2 marks).
Ans: Ms = Monetary base * (1+cr)/(cr+rr), where cr is the currency ratio and rr is the reserve ratio. The BOC can only directly control the monetary base via open market operations. Consumers decide cr and commercial banks decide rr.

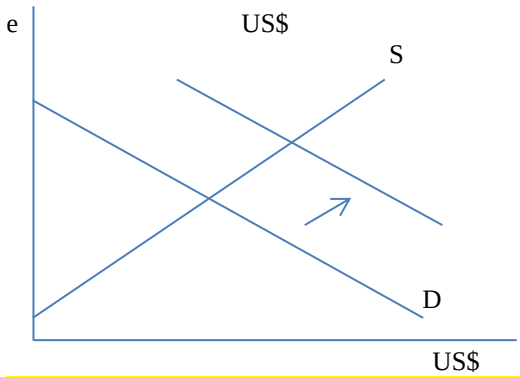
Article 3: Bank of Canada rate cut sends loonie (the Canadian dollar) to lowest level since 2009
January 21, 2015 http://business.financialpost.com/2015/01/21/bank-of-canada-rate-cut-sends-loonie-to-lowest-level-in-nearly-six-years

Canada's dollar sank the most in more than three years after the central bank unexpectedly cut interest rates, saying crude oil's collapse will weigh on the economy. The currency reached the weakest level in almost six years after the Bank of Canada reduced economic forecasts and lowered the benchmark rate target to 0.75%, from 1%, where it's been since 2010.

The currency depreciated from $1.2340 per U.S. dollar to $1.2394, the weakest level since April 2009.

(iii) Article 3:

(a) Use the foreign exchange diagram to illustrate why the Canadian dollar depreciated due to the rate cut. Also explain in words (4 marks).



Ans: As our ONR falls, our financial assets offer a lower rate of return compared to foreign (US) assets. With ic<ius, this will increase our demand US$ to buy US assets. Demand for US$ shifts up, causing a depreciation in the C$.

Note: Some students may also have the supply of US$ shifting leftward, which is fine. This shift reinforces the rise in e.

(b) Focus only on the rate cut and the Canadian dollar depreciation: Explain how Canada's current account and capital account will be affected (4 marks).

Ans: As our currency depreciates, our exports become cheaper and imports become more expensive. Our NX, which is a main component of CA, will rise, so ΔCA>0. As Canadians buy more US assets driven by ic<ius, money flows from Canada to the US, which is ΔKA<0.

(c) Write down the definition of the real exchange rate. Explain why the monetary policies that we have discussed so far may not be effective in increasing the Canadian GDP in the long run via the real exchange rate. Let the foreign country be the US and the home country be Canada (4 marks).

Ans: E = ePus/Pc; with increase in money supply (fall in interest rate) and the subsequent stimulation in Y (via higher NX and investment spending or even consumer spending), the price level is likely to rise. As Pc rises together with e, the net effect on E is not clear. Depending on the relative magnitude of Pc increase versus e increase, E can rise, fall or remain constant.

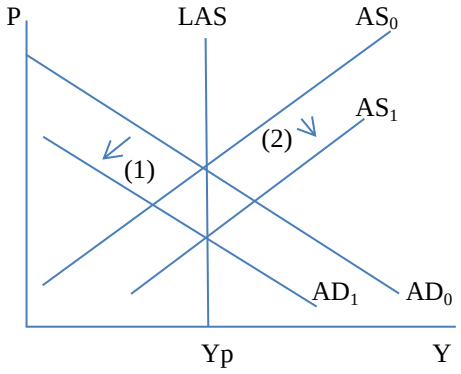
Article 4: Feds won't 'engage' in stimulus program despite plunging oil prices: Oliver
February 3, 2015 http://www.ctvnews.ca/politics/feds-won-t-engage-in-stimulus-program-despite-plunging-oil-prices-oliver-1.2204819

OTTAWA -- Despite concerns over the impact of plunging oil prices on the Canadian economy, Finance Minister Joe Oliver says the federal government will not bring forward a stimulus plan at this time. Oliver said the federal government still intends to balance the budget in 2015.

"We're not going to engage in a stimulus program at this point," Oliver told CTV's Question Period. "We're comfortable that the Canadian economy is in good space, in spite of this shock."

(iv) Article 4: Given the stance of the federal government, how do you expect the fall in investment confidence to affect Canada's budget balance (BB) and structural budget balance (SBB)? Write down these two equations and explain. For simplicity, assume that BB=SBB=0 before this investment confidence change (4 marks).
Ans: BB=t*Y- G, SBB=t*Yp – G. For the same t and G, because Y is less than Yp, we know that BB will experience negative change such that BB<0. As a result, the government may temporarily fall into a short run deficit. Yp is long run GDP that remains constant, so SBB remains constant.

(v) Given the dramatic fall in investment confidence arising from the oil industry, suppose neither the Bank of Canada nor the Canadian government responds with any policy change. Use the AD/AS/LAS diagram to explain how the Canadian economy will adjust to this fall in investment confidence by itself to the long run. Also describe in words. Hint: Keep in mind that crude oil is also a main production input for many Canadian firms, and the fall in oil prices will slowly affect the firms (4 marks).



Ans: After AD shifts inward due to the fall in investment confidence, the economy is in a recession. This rise in unemployment rate will lead to downward pressure on wages, which shifts AS to the right. Meanwhile, the fall in oil prices will lead to lower production costs for Canadian firms eventually. This will also shift AS to the right. In the end, we go back to Yp but with a lower price level or inflation rate.

The End… Have a Great Summer!