

**Concordia University  
Department of Economics  
ECON 203 Section C  
Fall 2009**

**MIDTERM EXAMINATION AND ANSWERS**

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_  
Mark: \_\_\_\_\_/50 marks

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October 22<sup>nd</sup>, 2009  
Time Limit: 75 minutes

**Part I. Multiple Choice Questions. Circle the best answers (10 marks).**

1. Historically, the largest component of GDP in Canada from the expenditure approach is
  - a. Government purchases.
  - b. Net exports.
  - c. Income taxes.
  - d. Private domestic investment.
  - e. **Consumption.**
  
2. Which of the following statements about inflation is TRUE? (from posted past final)
  - a. Inflation does not affect nominal variables.
  - b. Inflation raises the value of real GDP and nominal GDP.
  - c. **People who have to make future payments will benefit from periods of high and unexpected inflation.**
  - d. People who earn future payments will benefit from periods of high and unexpected inflation.
  - e. Both B and C.
  
3. If labour force in Utopia grows by 10 per cent and employment grows by 7 percent unemployment rate will (from Tutorial #1)
  - a. **Increase by about 3 percent.**
  - b. Remain unchanged.
  - c. Fall by about 3 percent.
  - d. Rise by about 17 percent.
  - e. Cannot be determined.
  
4. If the natural rate of unemployment is 7% and the frictional unemployment rate is 1.5%, then the actual unemployment rate is
  - a. 5.5%.
  - b. 7%.
  - c. 8.5%.
  - d. 10%.
  - e. **Cannot be determined (Since frictional is part of natural, so the 1.5% is inside the 7%. We do not know cyclical).**
  
5. If  $Y < AE$ , then inventory would
  - a. Increase and Y would increase.
  - b. Increase and Y would drop.
  - c. **Decrease and Y would increase.**
  - d. Decrease and Y would drop.
  - e. Decrease and Y would remain constant.
  
6. For a given fluctuation in autonomous expenditure, economies with steeper AE functions have (from Tutorial #3)
  - a. Lower MPCs and will experience smaller business cycle fluctuations in real GDP and employment.
  - b. Lower MPCs and will experience larger business cycle fluctuations in real GDP and employment.
  - c. Higher MPCs and will experience smaller business cycle fluctuations in real GDP and employment.
  - d. **Higher MPCs and will experience larger business cycle fluctuations in real GDP and employment.**
  - e. None of the above.
  
7. If potential output exceeds short run equilibrium output, eventually (from Tutorial #2)
  - a. Input prices will rise and output will fall.
  - b. Both input prices and output will rise.
  - c. **Input prices will fall and output will rise.**
  - d. Both input prices and output will fall.
  - e. Lump sum taxes will fall.
  
8. According to Okun's law, if the unemployment rate is 8% and the natural rate  $U_n$  is 7%, then the actual Y must be (from past midterm)
  - a. 1% above the  $Y_p$  growth rate.
  - b. 1% below the  $Y_p$  growth rate.
  - c. 2% above the  $Y_p$  growth rate.
  - d. 4% below the  $Y_p$  growth rate.
  - e. **None of the above.**

9. According to “lean against the wind” fiscal policies, an economic recession  $Y < Y_p$  implies that the government should (from past midterm)
- Cut tax rates and increase government spending.**
  - Raise tax rates and decrease government spending.
  - Leave tax rates and government spending unchanged.
  - Run a balanced budget.
  - Both C and D.
10. If the budget balance and structural budget balance have both changed from \$10 billion to \$20 billion with  $Y_p$  constant, this implies that (from past midterm)
- The government has increased its expenditure and/or cut taxes.
  - The government has decreased its expenditure and/or raise taxes.**
  - The economy has fallen into a recession.
  - Both A and C.
  - None of the above.

**Part II: Answer all questions (Total=40 marks)**

**Question #1 GDP (Total=4 marks) (from Lyryx)**

Use the following table from the year 2008 to answer the questions below:

Item:	Amount (\$ Billions)	Item:	Amount (\$ Billions)
Government purchases of goods and services	600	Consumption expenditure	1100
Wages paid to labor	1200	Interest and investment income	100
Investment expenditure	500	Import	100
Indirect taxes	700	Depreciation	250
Income taxes	150	Fixed capital formation	200
Profits	700	Farmers' income	400
Export	600	Unincorporated non-farm business income	300
Subsidies	???		

- (i) Find the value of nominal GDP. Show all steps and variables (1 mark).  
**Ans:  $Y = C + I + G + NX = \$(1100 + 500 + 600 + 600 - 100) = \$2700$ .**
- (ii) Find the value of subsidies. Show all steps and variables (1 mark).  
**Ans:  $\$2700 = \$(1200 + 700 + 700 + 100 + 250 + 400 + 300 - \text{Sub})$ , so  $\text{Sub} = \$950$ .**
- (iii) Suppose that the CPI for 2005=105 and the CPI for 2008=98. Find the real GDP for 2008 to 1 decimal place (1 mark).  
**Ans:  $\text{Real GDP} = \$2700 / 98 * 100 = \$2755$  (Tutorial #1, Question 4).**
- (iv) Find the inflation rate between 2005 and 2008 to 1 decimal place. Is this inflation or deflation? Explain (1 mark).  
**Ans:  $(98 - 105) / 105 * 100 = -6.7\% \rightarrow$  deflation since prices have dropped.**

**Question #2 Unemployment (Total=6 marks) (from Lyryx)**

Consider the following data collected from a country:

Total population	1132
Population under 15 years of age	392
Not in the labour force	330
Unemployed	74
Part-time workers looking for full-time jobs	33

(i) Calculate the size of the labour force (2 marks).

**Ans: LF=Population – under 15 years – not in LF = 410.**

(ii) Calculate the unemployment rate to 2 decimal places (2 marks).

**Ans:  $74/410 \times 100 = 18.05\%$ .**

(iii) Refer to the CTV news article discussed in class: What was our (approximate) unemployment rate in August 2009? (1 mark). The article says that our unemployment rate has increased even though more net new jobs have been created in August. Explain why our unemployment rate has increased (1 mark).

**Ans: The complete article “New jobs created but unemployment rate edges up” is linked from our course website → 8.7% (answers between 7.6% to 9% will receive 1 mark) → Increased from 8.3% due to more people entering the LF than new net job creation.**

**Question #3 True or False: Explain whether the following two statements are true or false. Marks are based solely on explanation. No marks will be awarded by simply stating “true” or “false” without explanation. (Total=6 marks) (from past final exam posted)**

(i) The US trade deficits ( $NX < 0$ ) are not related to its tax cuts and low private savings rates (3 marks).

**Ans: False →  $NX = (S - I) + (T - G)$ , so if S and T drop, NX drops. If private citizens do not save enough to supply funds for private firms to borrow and the government does not collect enough taxes to cover G, the country has to borrow from somewhere.  $NX < 0$  means this country borrows from other countries.**

- (ii) An increase in government spending has no effect on equilibrium income (output) if it is financed by an equal increase in lump sum taxes (3 marks).

**Ans: False → If G rises by 1, first round says Y rises by 1. If T drops by 1, first round says Y rises only by consumption. Since  $MPC < 1$ , then Y rises less than 1 (from Tutorial #4 answers posted, Question #2, part (v) (c)).**

**Question #4 Okun's Law and AD/AS (Total=6 marks) (from Lyryx)**

Suppose we have the following data for an economy:

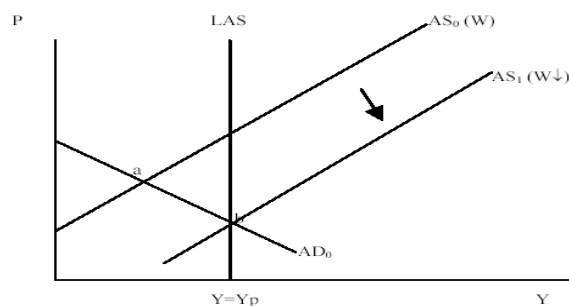
Year	Potential Output (billions 99\$)	Real GDP (billions 99\$)
1998	1,038	1,017
1999	1,069	1,030
2000	1,101	1,101
2001	1,134	1,160
2002	1,168	1,139
2003	1,203	1,130
2004	1,240	1,187

- (i) If the unemployment rate in 2000 were 7 percent, what unemployment rate would Okun's Law predict for the years 2001 and 2002, respectively? Keep your calculations and answers to 2 decimal places (2 marks).

**Ans:  $U_{2001} - 7\% = -0.5(\% \Delta Y - \% \Delta Y_p)$ , so  $\% \Delta Y = (1160 - 1101) / 1101 * 100$ , and  $\% \Delta Y_p = (1134 - 1101) / 1101 * 100$ . So  $U_{2001} = 5.82\%$ . Same idea for 2002, so  $U_{2002} = 8.23\%$ .**

- (ii) Consider your answer for 2002: Describe how the economy would adjust back to  $Y_p$  eventually. Use the AD/AS/LAS graph to illustrate your answers (4 marks).

**Ans: Since 2002 unemployment rate is higher than 7%, we know  $Y < Y_p$ . This corresponds to point "a" in the graph. With high unemployment, wages will eventually decrease, which will cut costs for firms. This would shift AS to the right and increase production and bring Y back to  $Y_p$  at point "b".**



**Question #5 Policies (Total=18 marks) (From Lyryx AND Similar to past midterm posted)**

Suppose the Canadian economy can be described as follows:

$$C = 60 + 0.8Y_d \text{ (} Y_d \text{ is disposable income)}$$

$$I = 60 \text{ (Investment spending)}$$

$$G = 280 \text{ (Government purchases)}$$

$$T = 0.2Y \text{ (Percentage taxes)}$$

$$X = 300 \text{ (Exports)}$$

$$Z = 0.14Y \text{ (Imports)}$$

- (i) Calculate the equilibrium  $Y$ . Also let this value of  $Y$  to be  $Y_p$  (2 marks).

**Ans:  $Y=1400$ . See class notes for steps.**

- (ii) Find the autonomous multiplier (1 mark).

**Ans: 2. See class notes for equation.**

- (iii) Find the government budget balance  $BB$ , given your  $Y$  in (i). Is the government running a surplus or deficit or neither? (1 mark).

**Ans:  $BB=280-280=0$ .**

**U.S. consumer confidence slips: Americans remain worried about their jobs**

Last Updated: Tuesday, September 29, 2009 | 11:02 AM ET [CBC News](#)

American consumers continue to sit on their wallets, according to two sets of data released Tuesday. The U.S. Conference Board reported its consumer confidence index fell in September. The index fell to 53.1 in September from 54.5 in August. That erases some of the seven-point gain for the index made from July to August. Americans grew more concerned about the economy, their job prospects and their incomes, the board said.

- (iv) Suppose the recent financial market problems have led US consumer confidence to drop, and hence Canada's exports fall from 300 to 100. Find the new  $Y$  (2 marks).

**Ans:  $Y=1000$ , since  $\Delta X=-200$ , with multiplier,  $\Delta Y= -400$ .**

- (v) Using two rounds, explain how the drop in our exports affects  $Y$ . Let the first round be related to autos and the second round related to clothing (4 marks).

**Ans:**

**Round 1** →  $\Delta \text{exports} = -200$ , so  $\Delta Y = -200$  in car production.

**Round 2** → As the before-tax income of car workers drops by 200, their after-tax income really only drops by  $0.8 \cdot 200 = \$160$  → their consumption drops by  $0.8 \cdot \$160 = \$128$  → However, part of this drop in consumption is suffered by foreign firms since imports would drop by  $0.14 \cdot \$200 = \$28$  → The net job/production loss in the clothing sector in this country is only \$100.

**Note:** With the multiplier of 2, we expect the power series to be  $1 + 0.5 + (0.5)^2 + \dots$ . Notice that from round 1 the  $\Delta Y = -200$ , and from round 2 the  $\Delta Y = -100$ , which is precisely half of the previous round.

- (vi) Find the budget balance, given your Y in (iv). Is the government running a surplus or deficit or neither? (1 mark).

**Ans:**  $BB = 200 - 280 = -80$ .

- (vii) Suppose the government wants to push the economy back to the Y level in (i) but with exports still at 100. Find the new G necessary. Also find the new budget balance BB (4 marks).

**Ans:**  $BB = 280 - 480 = -200$ , new  $G = 480$  since exports have dropped by 200, G needs to rise by 200.

#### **Ottawa could wipe out decade of debt payments**

Updated Wed. Jan. 21 2009 5:50 PM ET

CTV.ca News Staff

Canada's parliamentary budget watchdog is warning that the federal government is at risk of wiping out the last 11 years of debt payments due to the massive deficits forecasted for the next five years. Parliamentary budget officer Kevin Page issued the economic and fiscal brief in advance of the highly anticipated Jan. 27 budget, in which the Conservatives are expected to table a \$40 billion deficit. Page estimates that Canada will rack up at least \$46 billion in debt over the next five years, and possibly as much as \$105 billion. Canada has paid down about \$105 billion in federal debt since 1998.

The report says that Canada is headed for a structural surplus of about \$6 billion each year for the next five years, respectively. Page also warns that "we want to maintain as close as possible a structural balance."

- (viii) The above article says we expect a budget deficit of \$40 billion in 2009 and yet it also says we are headed for a structural surplus of \$6 billion in 2009. Does the article contradict itself? Explain (3 marks).

**Ans:** No contradiction → \$40 billion due to recession, so tax revenue drops, hence deficit → \$6 billion by keeping  $Y_p$  quite constant or growing slowly, so tax revenue quite constant. So given government spending and tax rates, when our Y eventually recovers, we expect a structural budget surplus of \$6 billion.

The End