Concordia University
Department of Economics
ECON 203
MIDTERM EXAMINATION AND ANSWERS

Part I. Multiple Choice Questions. Circle the best answers.

1. Consider the Real GDP expressed in 1950 Dollars and the Real GDP expressed in 2000 Dollars. The growth rate of the economy between 2001 and 2002 calculated using the Real GDP in 1950 Dollars is (from tutorial #1)
   a. Lower than the growth rate calculated using the Real GDP in 2000 Dollars.
   b. Higher than the growth rate calculated using the Real GDP in 2000 Dollars.
   c. The same as the growth rate calculated using the Real GDP in 2000 Dollars.
   d. It can be any of the above answers, depending on circumstances.
   e. Cannot be determined.

2. In Pluto, 100,000 people are in the labour force and the unemployment rate is 25%. As Pluto moves out of a recession and jobs increase, 20,000 discouraged workers become "encouraged" to search for jobs and join the labour force. The unemployment rate becomes
   a. 20%.
   b. 25.75%.
   c. 35%.
   d. 45%.
   e. None of the above (the right answer is 37.5%).

3. If Japan's GDP is higher than its GNP, then
   a. Japanese workers working outside of Japan earn more income than foreigners working in Japan.
   b. Japanese workers working outside of Japan earn less income than foreigners working in Japan.
   c. Japanese workers working outside of Japan earn the same amount of income as foreigners working in Japan.
   d. Japan's net exports must be positive.
   e. Japan's net exports must be negative.

4. Which of the following is FALSE?
   a. The bigger the multiplier, the higher the impact of a change in any autonomous variable on equilibrium output.
   b. A discouraged worker is no longer in the labor force.
   c. Unanticipated inflation benefits borrowers.
   d. For a given nominal interest rate, the real interest rate is lower when there is a low inflation rate.
   e. The marginal tax rate has a negative effect on the multiplier.

5. Which of the following would shift the AD curve to the right?
   a. Increase in government purchases, investment spending, autonomous consumption or taxes.
   b. Increase in government purchases, investment spending, autonomous consumption or imports.
   c. Increase in government purchases, investment spending or autonomous consumption.
   d. Decrease in government purchases, investment spending, autonomous consumption or taxes.
   e. Decrease in government purchases or investment spending, and increases in autonomous consumption or taxes.

6. If the Canadian economy is at full employment, then
   a. The entire population is employed.
   b. The unemployment rate is zero.
   c. The unemployment rate is still positive at the natural rate, which is around 4% for Canada **(the right answer is 6-7%)**.
   d. A and B.
   e. None of the above.

7. Canadian consumers are losing their consumer confidence because of the recent financial market fluctuations. As a result, consumers are cutting their spending and accelerating our economic slowdown. If you work for the Department of Finance, Ottawa and you hope for a minimal negative impact on the economy, which of the following consumption function would you like to see? (from past midterm and tutorial #3)
   a. C=100+0.4(Y-T)
   b. C=80+0.5(Y-T)
   c. C=150+0.75(Y-T)
   d. C=100+0.9(Y-T)
   e. C=100+0.95(Y-T)

8. According to Okun's law, if the unemployment rate is 6% and the natural rate Un is 7%, then the actual Y must be
   a. 1% above the Yp growth rate.
   b. 1% below the Yp growth rate.
   c. 2% above the Yp growth rate.
   d. 2% below the Yp growth rate.
   e. None of the above.

9. According to "lean against the wind" fiscal policies, an economic boom Y>Yp implies that the government should
   a. Cut tax rates and increase government spending.
   b. Raise tax rates and decrease government spending.
   c. Leave tax rates and government spending unchanged.
   d. Leave tax rates unchanged and increase government spending.
   e. Run a balanced budget.

10. If the budget balance and structural budget balance have both changed from $10 billion to $20 billion with Yp constant, this implies that
   a. The government has increased its expenditure and/or cut taxes.
   b. The government has decreased its expenditure and/or raise taxes.
   c. The economy has fallen into a recession.
   d. A and C.
   e. None of the above.

<u>Part II: Answer all questions</u>

Question #1

Suppose there is an economy that produces only four goods in one year.
Paper: $8,000 Books: $15,000 Toner: $4,000 Envelopes: $5,000

The production of books requires the following amount of intermediate goods:
Paper: $4,000 Toner: $2,500

The production of envelopes requires the following amount of intermediate goods:
Paper: $2,500

(i) Find the total GDP for the economy.
Ans: The correct answer was: $23,000. $8,000 + $15,000 + $4,000 + $5,000 = $32,000 for all four products (paper+books+toner+envelopes), but we need to take out intermediate goods. This means we need to subtract $4,000 + $2,500 + $2,500 = $9,000. The value of GDP is only $23,000.

(ii) Find the value of paper sold as a final good.
Ans: The correct answer was: $1,500. Papers are used in both the production of books and envelopes. The total input value is $6,500. Hence, the final value of papers is only $1,500.

(iii) Find the value of toner sold as a final good.
Ans: The correct answer was: $1,500. The value of toner is $4,000, but $2,500 went into the production of books. Therefore, the final value of toner is only $1,500.

Question #2

Your father stopped drinking beer in 2005. When you asked him why he stopped, he said, "I stopped because it was just getting too expensive. In 1990, beer was only $24 per case. The last case I bought in 2005 was $32, and I just couldn't justify spending $8 more on a case of beer." Assume the CPI in 1990 was 78.4 and the CPI in 2005 was 107.

(i) What is the equivalent cost of a 1990 case of beer measured in 2005 prices?
Ans: $24*107/78.4=$32.76.
Note: Some students calculated (107-78.4)/78.4*100, which gives inflation rate of 36.48%, and hence adjusted $24 by 1.3648, which gives $32.76. This is obviously fine, too, but longer.

(ii) What is the equivalent cost of a 2005 case of beer measured in 1990 prices?
Ans: $32*78.4/107 = $23.45.
Note: Some students calculated (78.4-107)/107*100, which gives inflation (deflation) rate of -26.73%, and hence adjusted $32 by (100-26.73)=73.27%, which gives $23.45. This is obviously fine, too, but longer.

(iii) Has the real price of beer increased or decreased over the years? Explain.
Ans: The real price has dropped.

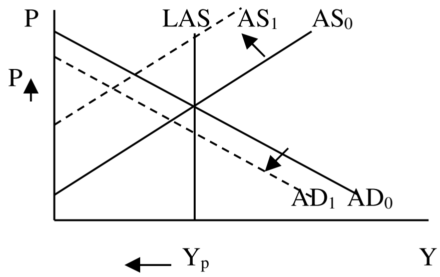
Question #3 AD/AS

Consider the following excerpt from the Globe and Mail:

U.S. slowdown cutting deeply into Canadian exports
HEATHER SCOFFIELD, Globe and Mail Update, April 26, 2007 at 11:49 AM EST

Toronto — The slowdown in the United States is dragging on longer than expected, cutting deeply into Canada's exports, the Bank of Canada said Thursday in its semi-annual outlook. But at the same time, inflation is heating up in Canada, driven by energy prices, the bank says. Total inflation is expected to surge close to 3 per cent near the end of this year.

(i) **Based on the article above**, use the AD/AS/LAS diagram to demonstrate how the slowdown in the US and the rise in oil prices would affect our Canadian economy. For simplicity, assume that before these changes the Canadian economy was in the short run and long run equilibrium. Discuss the effects on the inflation rate and the unemployment rate.
Ans: AS shifts left since production costs have ↑, AD shifts down since our exports have ↓. But based on the article, inflation is expected to rise by 3%, so the AS shift must be larger than the AD shift.



(ii) If you are working as an economist for the Department of Finance and your boss asks you to keep the actual unemployment rate at the natural rate.
  (a) What fiscal policy changes would you recommend? Explain.
  Ans: ↑G, ↓T since AD will rise as G ↑ and the tax cut will ↑C.

  (b) Suppose BB=0 before this news article was published. How would the BB be affected now? Explain.
  Ans: BB<0.

  (c) How would the inflation rate be affected? Explain.
  Ans: Inflation would rise.

Question #4

Suppose the Canadian economy can be described as follows:

$C = 100 + 0.75\ Y_d$ (Y_d is disposable income)		$I = 160$	(investment spending)
$G = 250$	(government purchases)	$T = 0.2Y$	(constant, lump sum taxes)
$X=115$	(exports are constant)	$Z=0.1Y$	(imports depend positively on our own Y)

(i) Calculate the equilibrium Y. Also let this value of Y to be Yp.
Ans: Y=1250.

(ii) Find the autonomous multiplier.
Ans: 2.

(iii) Find the government budget balance BB=tY-G, given your Y in (i). Is the government running a surplus or deficit or neither?
Ans: BB=0.

(iv) Suppose the recent financial market problems have led investment confidence to drop from 160 to 120. Find the new Y.
Ans: Y=1170.

(v) Using two rounds, explain how the drop in investment confidence affects Y. Let the first round be related to autos and the second round related to clothing.
Ans: First round means our auto production will drop by 40 units. Their income will drop by 40.
Second round means auto workers suffer a loss of income of 40, of which 20% or 8 would have gone to pay for taxes.

They have to cut back their spending on clothing. However, they are only going to cut back their spending on clothing by 75% of 32 = 24. In addition, not all of these 24 units are suffered by Canadian clothing firms because part of these 24 units would have been imported from abroad. We would have imported 0.1(40)=4. Therefore, our Canadian firms suffer a loss of only 24-4 = 20. Our total production of clothing drops by 20. Notice that the drop in imports is 0.1Y, not 0.1(Y-T). Since Y has dropped by 40, this is why imports have fallen by 4 (covered in tutorial #4, question #3, (v)).

(vi) Find the government budget balance, given your Y in (iv). Is the government running a surplus or deficit or neither?
Ans: BB = -16.

(vii) Suppose the government wants to push the economy back to the Y level in (i) but with investment confidence still at 120. Find the new G necessary. Also find the new budget balance BB.
Ans: G=290, BB= - 40.

(viii) Without further calculations, argue whether you would support the government's action from above. Name one benefit of the government's action and also one cost arising from its action.
Ans: Cost → digging deeper into deficits; benefit → prevent a prolonged recession.