

Concordia University
Department of Economics
ECON 203 Section Z
Fall 2012-2013
Midterm exam
Version A

Name: _____

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Student ID: _____

October 18th, 2012

Mark: _____/100 marks

Time Limit: 75 minutes

Part I. Multiple Choice Questions. Circle the best answers (30 marks).

- 1) If the CPI in 2010 was 100 and the CPI in 2011 was 115, then the rate of inflation was
 - a. 115 percent.
 - b. 10 percent.
 - c. 11.5 percent.
 - d. **None of the above.**
- 2) 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:
 - a. Higher than the growth rate calculated using the Real GDP in 2000 Dollars.
 - b. **The same as the growth rate calculated using the Real GDP in 2000 Dollars.**
 - c. Lower than the growth rate calculated using the Real GDP in 2000 Dollars.
 - d. It can be any of the above answers, depending on circumstances.
- 3) If Toyota produces a car in a plant in Windsor, Ontario and exports it to Japan, the value of the car is included in which country's GDP?
 - a. Japan's, because Toyota is a Japanese company.
 - b. **Canada, because that is where it is produced.**
 - c. Both Japan and Canada, 50-50 split.
 - d. Japan's, because that is where the car is purchased.
- 4) If the economy is at full employment, then
 - a. **Actual unemployment rate is equal to the natural rate.**
 - b. The entire labour force is employed.
 - c. The unemployment rate is zero.
 - d. The unemployment is undefined at the natural rate.
- 5) If the actual unemployment rate is 7%, the natural unemployment rate is 6% and $Y_p = 500$ and remains constant over time, then actual Y is equal to
 - a. 510
 - b. **490**
 - c. 510.
 - d. 500.
 - e. 600.
- 6) If $Y > AE$, then inventory would
 - a. Increase and Y would increase.
 - b. Decrease and Y would increase.
 - c. Decrease and Y would drop.
 - d. **Increase and Y would drop.**

- 7) The New Democratic Party (NDP) wants the Conservative government to spend more money on all social services. If the NDP wants the spending to have maximum effect on economic growth, which of the following saving equations would it prefer to see?
- $S=120+0.4(Y-T)$
 - $S=80+0.8(Y-T)$
 - $S=150+0.75(Y-T)$
 - $S=110+0.9(Y-T)$
- 8) Suppose nominal GDP grew from \$100 billion to \$110 billion and the GDP deflator grew from 110 to 112.2. As a result:
- real GDP was unchanged.
 - real GDP increased by about 8%.**
 - real GDP increased by about 3%.
 - real GDP declined by about 7.2%
- 9) Suppose that money wages rates rise by 2% and labour productivity increases by 5%. Other things equal:
- The unit labor cost will increase and the aggregate supply curve will shift to the left.
 - The unit labor cost will increase and the aggregate expenditure curve will shift down.
 - The unit labor cost will decrease and the aggregate supply curve will shift to the right.**
 - The unit labor cost will decrease and the aggregate demand curve will shift to the left.
- 10) If marginal propensity to save=0.4, marginal propensity to tax =0.2 and marginal propensity to import=0.28, then an increase in consumer confidence by 100 will make equilibrium income
- Increase by 104.16
 - increase by 500
 - Increase by 200
 - increase by 125**

True or false (10 marks)

- a) Wynn is lending \$2,000 to Jessica for 1 year. They agree that Wynn should earn a 4% real interest rate per year. The Consumer Price Index (CPI) is 100 at the time that Wynn makes the loan. It is expected to be 110 in 1 year. Is the following statement true or false "the nominal rate of interest Wynn should charge Jessica should be 6%" (5 marks)

Real interest rate = nominal interest rate - inflation rate

$$4 = ? - \frac{CPI_2 - CPI_1}{CPI_1} * 100$$

(X)

$$4 = X - \left(\frac{110 - 100}{100} * 100 \right)$$

$$\text{nominal interest} = 4 + 10 = 14\% \rightarrow \text{so the statement is X}$$

- b) Canada ran trade deficits in 2011. In order to eliminate this trade deficit, the Canadian government should increase government spending and encourage private savings [Hint: Use the leakage and injection equation(s) to support your answer.] (5 marks)

$$\text{Injections} = \text{Leakages}$$

$$I + G + X = S + T + Z$$

$$X - Z = S - I + T - G$$

In this question we want Nx to \uparrow this happens if

$$S \uparrow, I \downarrow, T \uparrow, (G \downarrow)$$

(X)

so this statement is false because it says that to $\uparrow Nx$ G has to \uparrow which is not true.

Part II: Current events (Total=10 marks)

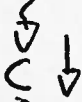
A) Consumer confidence wanes on gas-price hikes (5 marks)

Date : Monday, June 02, 2008

Canadian consumer confidence stumbled in May, when gasoline prices shot to record highs, the Conference Board said Monday. The Ottawa-based research group said its consumer confidence index fell seven points to 85.8 in May, the lowest level since the Conference Board of Canada said it switched to a monthly survey in December 2001.

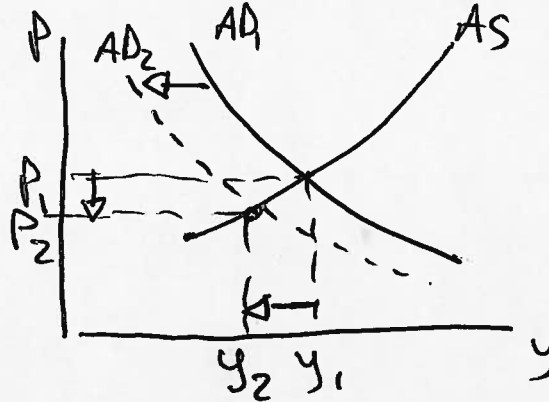
Based on the article above, use the AD/AS diagram to demonstrate how the fall in the Canadian consumer confidence would affect the Canadian economy. What is the effect on price level, income and employment?

Canadian cons. conf ↓



AD ↓ "shift left"

P ↓, Y ↓, employment ↓



B) Consider the following excerpt from the Conference board of Canada:

Could Iran Send Oil Prices Soaring Again? (5 marks)

Reference: Chris Lafakis, "Iran Threat Could Boost Oil Prices", *Moody's Analytics* (January 2012).

"The Iranian government continues to resist Western demands to close its nuclear program. This development has increased the possibility that Europe will follow through on its threat to ban oil imports from Iran. Not surprisingly, Iran has vowed to shut down the Strait of Hormuz in retaliation, which around 70 per cent of OPEC's oil exports pass through"

Based on the article above, use the AD/AS diagram to demonstrate how the shutdown of the Strait of Hormuz would affect the Canadian economy. What is the effect on price level, income and employment?

Shut down of strait of Hormuz

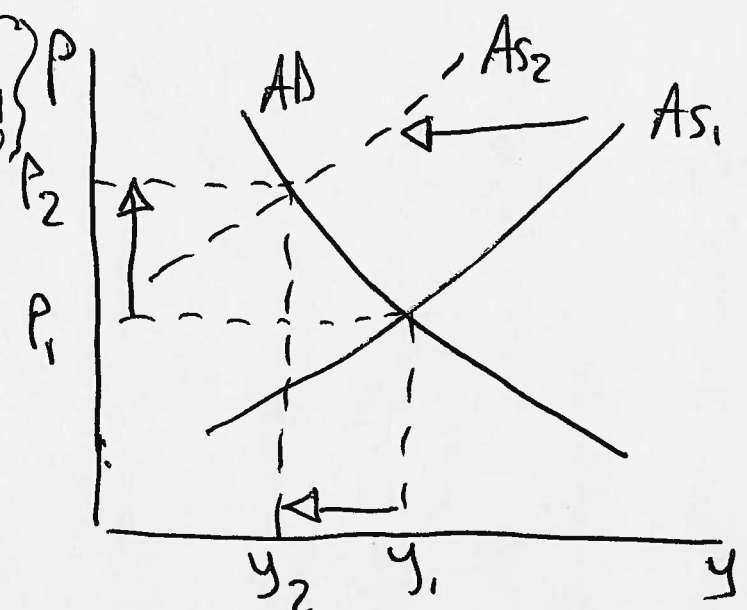
international P_{oil} ↑

cost of prod ↑

AS ↓ "shift left"

P ↑, Y ↓, employment ↓

Stagflation



Part III: Problems (Total=50 marks)

Problem # 1(25 marks)

Consider the following data collected from a country.

Total population	860
Population under 15 years of age or institutionalized	221
Not in the labour force	253
Unemployed	56
Part-time workers looking for full-time jobs	139

a) Calculate the size of the labour force. (5 marks)

$$\begin{aligned} L.f &= \text{total population} - \text{pop under 15} - \text{people not in L.f} \\ &= 860 - 221 - 253 \\ &= 386 \end{aligned}$$

b) Calculate the unemployment rate. (5 marks)

$$\begin{aligned} \text{unemployment rate} &= \frac{\# \text{ of people unemployed}}{L.f} \times 100 \\ &= \frac{56}{386} \times 100 = 14.50 \end{aligned}$$

c) Now suppose that 10 of the people who are not in the labor force (probably because they were discouraged) are now looking for work, calculate the new unemployment rate. (5 marks)

$$\begin{aligned} \text{new unemployment rate} &= \frac{\text{new \# of people unemployed}}{\text{new L.f}} \times 100 \\ &= \frac{56 + 10}{860 - 221 - 243} = \frac{66}{396} = 16.66 \end{aligned}$$

d) True or false "High unemployment rates imply less people are working" Justify your answer (5 marks)

(X) As seen in the previous question, the unemployment rate increased ~~inspite of~~ although the number of people employed did not change, this happened because ~~there~~ some of the people who were discouraged are now added to the L.f.

e) Assume that the structural unemployment rate is 1.5 % and the frictional unemployment rate is 1.5 % calculate the Natural rate of unemployment and the Cyclical rate of unemployment (use your result from point (b) for that. (5 marks).

$$\begin{aligned} \text{Natural unemployment} &= \text{structural unemployment} + \text{frictional unemployment} \\ &= 1.5 + 1.5 = 3\% \end{aligned}$$

~~actual~~ actual unemployment $\left(\begin{array}{l} 14.50 \\ \left[\begin{array}{l} 3\% \text{ natural} \\ 11.5\% \text{ cyclical} \end{array} \right. \end{array} \right.$

Problem # 2 (25 marks)

Suppose the Canadian economy can be described as follows:

$C = 100 + 0.6 Y_d$	(Y_d is disposable income)
$I = 100$	(investment spending)
$G = 210$	(government purchases)
$T = 0.15Y$	(proportional taxes)
$X = 20$	(exports are constant)
$Z = 0.01Y$	(imports depend positively on our own Y)

(i) Calculate the equilibrium Y . (5 marks).

$$\begin{aligned} AE &= C + I + G + X - Z \\ &= 100 + 0.6(y - 0.15y) + 100 + 210 + 20 - 0.01y \\ &= 430 + 0.5y \\ y &= AE \rightarrow \text{equilibrium condition} \\ y &= 430 + 0.5y \quad y = \frac{430}{0.5} = 860 \end{aligned}$$

(ii) Find the autonomous spending multiplier. (5 marks).

$$\text{spending multiplier} = \frac{1}{1 - \text{slope } AE} = \frac{1}{1 - 0.5} = 2$$

(iii) Find the government budget balance $BB = tY - G$, given your Y in (i). Is the government running a surplus or deficit or neither? (5 marks).

$$\begin{aligned} BB &= tY - G \\ &= 0.15(860) - 210 = -81 \text{ "budget deficit"} \end{aligned}$$

(iv) Suppose that potential output $Y_p = 1000$, what type of gap exists in the economy and what is its size? (5 marks).

$$\begin{aligned} \text{output gap} &= y - Y_p \\ &= 860 - 1000 = -140 \text{ "Recessionary gap"} \end{aligned}$$

(v) Suppose the government wants to push the economy back to Y_p level, Find the new G necessary to close the gap. Also find the new budget balance. What will happen to the public debt? (5 marks).

$$\text{spending multiplier} = \frac{\Delta y}{\Delta G} \rightarrow \Delta G = \frac{\Delta y}{\text{multiplier}} = \frac{140}{2} = 70$$

So if the Government ↑ its spending by 70 → y ↑ by 140 and the recessionary gap will be closed.

$$\text{new } BB = 0.15(1000) - (210 + 70) = -130 \text{ "bigger deficit"}$$

$$PD = -BB = -(-130) = 130 \text{ so PD will } \uparrow.$$