UBC
Econ 311 (001)
Midterm Solution

Ratna K. Shrestha
Full marks: 50
Time: 50 min
March 01, 2013

Student's Name: _____, _____
(Last) (First)

Student # _____

There are 3 short-answer, 8 MC and 5 fill in the blank questions. Once you have marked your answers for all MC questions, copy them to the right of the corresponding question number provided below.

1. .. 2... 3. ... 4. ..

5. .. 6. .. 7... 8. ..

Marking:

MC Questions: 2 x .....= ……

Fill in the Blank .....

SA Questions: 1. …….

2. ……..

3. ……..

_____
Total Marks:

A. Multiple Choice Questions: encircle the correct or best answer. (16 pts)

1. If A and B are substitute goods (in consumption) and the price of A increases, we will observe_____.

(a) an increase in the price but a decrease in the equilibrium quantity of B
(b) an increase in the price and the equilibrium quantity of B (demand for B shifts to the right and hence both P and Q increase)
(c) a decrease in the price and the equilibrium quantity of B
(d) a decrease in price but an increase in the equilibrium quantity of B

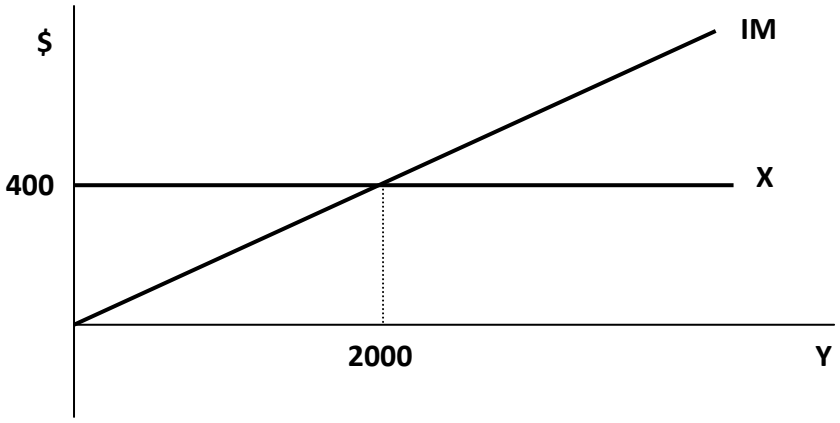
2. One reason that real GDP tends to overstate the economic well-being of the country's residents is that it ignores

a) transactions such as teenaged-babysitting services.
b) the costs of increased leisure time.
c) the effect of pollution associated with production. (since the negative effects of pollution are not taken into account in GDP calculation, the GDP as calculated overstates standard of living)
d) the market-based activity done from the home such as preparing meals.

3. Suppose aggregate output is demand-determined. If the business community decreases its planned investment expenditures (I) by $4 billion, causing equilibrium national income to fall by $12 billion, the marginal propensity to spend must be

a) 2/5.
b) 1/3.
c) 1/2.
d) 2/3. (M = 3; so 3 = 1(1 - z), thus z = 2/3)

4. The diagram below shows the import (IM) and export (X) functions for an economy.



The net export (NX) function for this economy can be expressed as

a) NX = 400 - 0.2Y. (The slope of IM curve = 40/2000 = 0.2)
b) NX = 200 - 400Y.

c) NX = 0.2Y.
d) NX = 400 - 0.5Y.

5. Consider the following news headline: "World Price of Wheat Rises Sharply." Choose the statement below that best describes the likely macroeconomic effects of this event in Canada assuming that Canada is a net exporter of wheat.

a) the AD curve shifts to the left and the AS curve shifts to the right; the price level falls and the effect on real GDP is indeterminate.
b) the AD and AS curves both shift to the right; the effect on the price level is indeterminate and real GDP increases.
c) the AD curve shifts to the right; the price level rises and hence the real GDP. (With the increase in world price, X increases which shifts AD to the right)
d) there is no change in either the AD or the AS curves.

6. If GDP in a richer country grows at the same annual rate as in a poorer country:

a) the gap between their standards of living will close over time as long as the rate of population growth is lower in the poorer country.
b) assuming no growth in population in both the countries, the gap between their standards of living will widen over time. (with the same % change, the change in Y is higher when initial Y is higher)
c) difference in their living standards will not change over time.
d) assuming no growth in population in both the countries, the gap between their standards of living will close over time.

7. Consider the market for loanable funds in the long run. The investment demand curve is downward sloping because

a) all components of desired investment are positively related to the real interest rate.
b) an increase in the real interest rate leads to an increase in investment demand.
c) a decrease in the real interest rate reflects a higher opportunity cost to firms of using loanable funds.
d) a decrease in the real interest rate reflects a lower opportunity cost to firms of using loanable funds.

8. Long-run aggregate supply curve can shift to the right (increase) for all of the following reasons *except:*

a) more aggregate labor hours.
b) an increase in human or physical capital.
c) a fall in the money wage rate and prices of other inputs.
d) the introduction of new technology.

B. Fill in the Blanks (16 pts)

1. (3 pts) An increase in expenditure on border security is Discretionary fiscal policy and the fall in taxes paid during a recession because business income falls is Automatic fiscal policy.

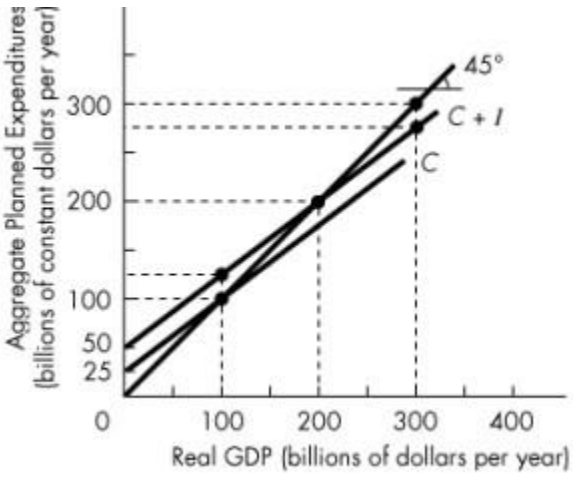
2. (4 pts) The national income data for an island economy for a one-year period (all numbers in billions of dollars) is: Y = $600; Depreciation =$ 22; Personal income taxes = $200; Sales taxes = $ 30; Transfer to households = $80; X = $140 and IM = $80. If consumption expenditure is $360, then the level of saving during that year is S = Y - C - NT = 600 - 360 - 200 + 80 =**120** (note that NT = T - transfer = 200 -80) and **net** domestic product is = Y - depreciation = 600 - 22 = 578.

3. (4 pts) The following table gives the AD schedule and the AS schedule of an imaginary economy with potential GDP, Y* = $7 trillion. If the prices of raw materials increase and as a result the AS curve shifts by $ 2 trillion at each price level, then the price level (GDP deflator) at the new short run equilibrium is $ 110 and real GDP is $ 6 trillion.

GDP Deflator ($)	AD ($ trillion)	AS ($ trillion)
90	10	4 (2)
100	8	6 (4)
110	6	8 (6)
120	4	10 (8)

4. (2 pts) When the actual rate of unemployment is equal to the natural rate of unemployment, then national income Y = Y* (potential GDP).

5. (3 pts) Consider the economy with no international trade and no government as shown by the following graph. In this economy when Y = $ 300 billion, AE = 275 billion.
AE = 50 +150 Y/200 = 50 + 0.75Y. So when Y = 300, AE = 275



C. Answer all of the following 3 questions as shortly and as precisely as possible (avoiding unnecessary explanation). (18 pts)

1. In an economy, consumption C = 500 + 0.8Y (note Y not Y_D), I = 150, G = 150, X = 200 and IM = 0.1Y.

(a) Calculate the equilibrium real GDP, Y, of this economy (assuming prices are constant). (3 pts)

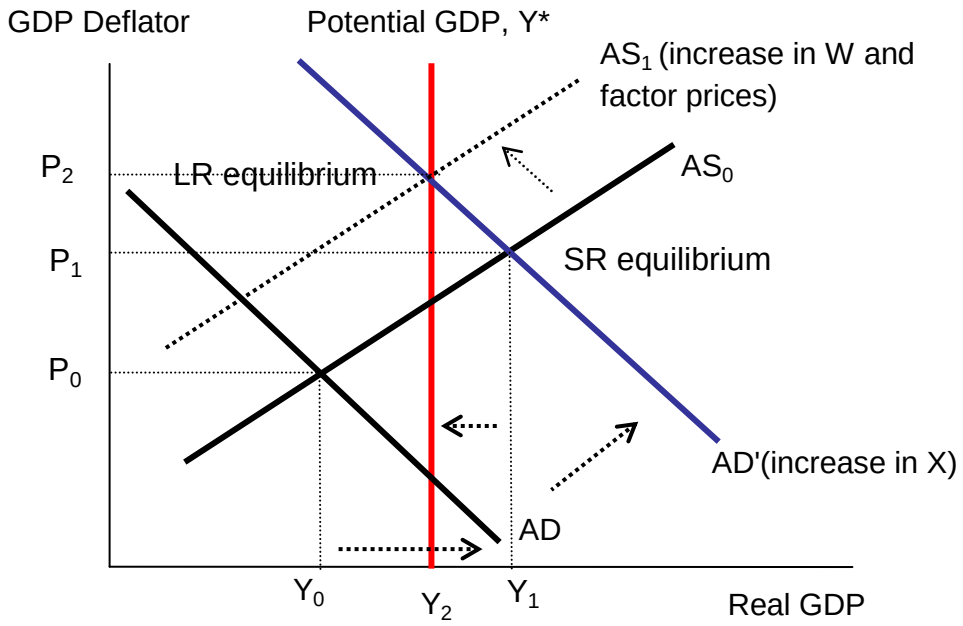
(b) By how much should the government increase G if it wants to boost the equilibrium Y by 400. (4 pts)

a) AE = C + I + G + X - IM = 500 + 0.8Y + 150+150+200 - 0.1Y = 1000 + 0.7Y
At Equilibrium, Y = AE
Y = 1000 + 0.7Y → **Y = $3333.33**

b) Multiplier M = 1/(1 - z) = 1(1 - 0.7) = 3.33 = ΔY/ΔG
3.33 = 400/ΔG → ΔG = $ 120

(Alternative new Y = new A + 0.7 (new Y),
3733.33 = 1000 + ΔG + 0.7*3733.33 → ΔG = 120)

2. Brazilian economy is in recession. What is the short-run effect of a sharp increase in the global demand for Brazilian cocoa on the Brazilian economy (price and real GDP)? Draw a self-explanatory graph to show this effect. Also show the economy's long-run natural tendency in your graph. Clearly indicate the reasons behind the shift of graphs but don't provide any extra explanation. (3+2 pts)



3. An island economy produces only lobsters and crabs as given below. The base year is 2002.

	In 2002	In 2003
Lobsters:	Q = 100, P = $20.	Q = 100, P = $30.
Crabs:	Q = 25, P = $10.	Q = 30, P = $20

Calculate the real GDP in 2002 and 2003 using Statistics Canada's new Chain Weighted Method. (6 pts).

1) GDP based on 2002 Prices

GDP (2002) = 100*20+25*10 = 2,250
GDP (2003) = 100*20+30*10 = 2,300

% change in GDP = (2300 - 2250)/2250 = 2.222%

2) GDP based on 2002 Prices

GDP (2002) = 100*30+25*20 = 3,500
GDP (2003) = 100*30+30*20 = 3,600

% change in GDP = (3600 - 3500)/3500 = 2.857%

3) Average % change = (2.222 + 2.857)/2 = 2.538 %

4) GDP (2002) = $ 2,250
GDP (2003) = 1.02538 *2250 = $2,307.11