ECO2142: Macroeconomic Theory I
Final Exam (16/12/2004)
University of Ottawa
Professor: Louis Hotte
Time allowed: 3 hours
No calculator allowed

Attention: *Graphics and equations should be accompanied with* **short and precise** *comments; it is often the only way to make a difference between a calculation mistake and deficient comprehension. However, comments that have nothing to do with the question will be interpreted as a lack of understanding.*

The exam is marked on ***100*** *points. This questionnaire has* ***2*** *pages.* GOOD LUCK!

1. (10 points) What would be your best guesses for the average output growth rate, unemployment rate, and inflation rate in Canada over the last ten years? NB I am looking for a reasonable approximation, not the exact answer.

2. (15 points) The following is an excerpt from an article published by The Economist (4/12/2004): "The dollar wobbled badly this week, having fallen for five successive days after Mr Greenspan said that America's current-account deficit was unsustainable because foreigners would eventually lose their appetite for more dollar-denominated assets." NB Mr Greenspan is chairman of the US Central Bank.

Interpret Mr Greenspan's comment concerning the relation between a current-account deficit and foreigners' appetite for dollar-denominated assets. **(In words only in approximately 1/2 page.)**

3. (45 points) The macroeconomic effects of antitrust legislation

Assume a **closed** economy in which the labor, goods and financial markets are respectively described by the following equations:

$$P = P^e(1+\mu)F(u,z), \tag{1}$$

$$Y = C(Y-T) + I(Y,i) + G, \tag{2}$$

$$\frac{M}{P} = YL(i), \tag{3}$$

where each variable, parameter and function are as described in the course. People expect the next period's price level to be equal to the present period's price level.

3.a)(8) Interpret the labor market equation by explaining how it was derived. (**No graphic necessary here.**)

3.b)(8) What is the natural unemployment level? Define it mathematically and show it on a graphic in the *real-wage* versus *unemployment* space.

Suppose now that the government introduces stricter antitrust legislation that **successfully** increases the intensity of competition between firms.

3.c)(8) Using the graphic drawn in question (1.b), show what will be the effect of this legislation on the natural unemployment level. Explain.

3.d)(8) Explain, with the help of **only one** graphic in the *price* versus *output* space, what will be the short-run and medium-run effects of this legislation on output, unemployment, and prices. Assume that prior to the new legislation, the economy was at its natural output equilibrium.

3.e)(8) Explain, with the help of **only one** graphic in the *interest rate* versus *output* space, what will be the short-run and medium-run consequences of this legislation on the goods and financial markets.

3.f)(5) According to this model of the economy, what could we say about the effects of stricter antitrust legislation on workers' welfare?

4. (30 points) Open economy under a fixed exchange rate regime

We describe an economy that is open to trade and subject to perfect capital mobility by the following system of equations:

$$Y = C(Y-T) + I(Y,i) + G - \epsilon Q(Y,\epsilon) + X(Y^*,\epsilon), \tag{4}$$

$$\frac{M}{P} = YL(i), \tag{5}$$

$$i_t = i_t^* + \frac{E_{t+1}^e - E_t}{E_t}, \tag{6}$$

where each variable, parameter, and function is defined as seen in the course. We shall assume that $E_{t+1}^e = \bar{E}^e$, that is, the expected exchange rate is fixed.

4.a)(10) Interpret relation (6) by explaining how it was derived.

4.b)(10) Analyze graphically and describe the effects of a fiscal contraction on the economy when exchange rates are fixed.

4.c)(10) Comment on the following assertion: "Under fixed exchange rates, the money stock must be constant".