14.02 Principles of Macroeconomics
Fall 2011

Quiz # 3
Thursday, December 8
7:30 PM – 9 PM

Please write your answers directly on the quiz. The exam has a total of 6 questions and a bonus (100+5 pts.). Please answer all of them. You should read all of the questions first and plan your time allocation.

NAME: ____________________

MIT ID NUMBER: ____________________

FRIDAY RECITATION: ____________________

EMAIL: ____________________

(Table is for corrector use only)

Question	1	2	3	4	5	6	Bonus	Total
Score								

1. Define the following concepts concisely in at most two sentences, showing that you have understood them, not just memorized definitions. (3 pts each)

Yield curve:

Ricardian equivalence:

Current account deficit:

Appreciation of currency:

Liquidity trap:

2. After its September meeting, the FOMC announced that interest rates will be kept at their current low levels until 2013, without a change in policy on the date of the announcement.

(a) (5 pts.) Should we think of such "talk" as policy? Can it have real effects? If so, what would the mechanism be?

(b) (5 pts.) If we think this is potentially effective policy, would it have an effect today, or in the future? Why?

(c) (5 pts.) Would the announcement have an effect on the yield curve today, in the future or never? Why?

3. Many countries experiencing high/hyperinflation choose to fix their exchange rates.

(a) (5pts) Why would this be an effective disinflationary policy?

(b) (8 pts.) Why do you think is this more common than just stopping the increase in the money supply?

(c) (7 pts.) What would happen if fiscal policy does not change and large budget deficits continue under fixed exchange rates?

4. Exporters in many countries complain if the (local) currency appreciates and pressure their central banks for depreciation.

(a) (5 pts.) How can the central bank depreciate the currency? Very briefly explain the mechanism showing that you know what you are talking about.

(b) (5 pts.) What effects would such depreciation have on exports, current account and output?

(c) (5 pts.) If there are successful policies to depreciate the currency and increase exports, why do countries not use these all the time?

5. Assume that the government is spending \$20 today and will spend \$11 next year. Also assume that these are real dollars so you need not worry about inflation. The real interest rate is 10%. The government has two tax plans. Under plan (a), your taxes are \$20 today and under plan (b) your taxes are \$10 today.

(a) (5 pts.) Calculate the present value of government spending. What will your taxes have to be next year under plans (a) and (b)?

(b) (5 pts.) Is the present value of your taxes different under the two distributions of taxes over time? If you can freely lend and borrow over time, what change in your spending would changing taxation from plan (a) to plan (b) induce?

(c) (5 pts.) If you cannot freely borrow over time, in particular, if your income today is low compared to your expected future income but you are unable to borrow against your future income and spend today, would a change in taxes from plan (a) to plan (b) have an effect on your spending?

6. Think about the following model, which should be familiar to you.

Aggregate supply is given by

$$Y=250+25P$$

Components of demand, money market and foreign exchange market are given by the following, with notation as defined in class:

$$C = 156 + 0.6DI - 25P$$
$$G = 800$$
$$T = 10$$
$$I = 175 - 20i + 0.3Y$$
$$NX = 100 – 0.1Y + 0.5/e$$
$$MS = 100$$
$$MD = 200 -20i + 0.2Y$$
$$1/e = 350 - 20i$$

Just to be clear, e is the value of foreign currency in terms of the domestic currency.

(a) (7 pts.) Find the equations of the IS and LM curves. Show your work and results (i.e. make it clear which equation is IS and which one is LM).

(b) (5 pts.) Find the equation of the aggregate demand curve and equilibrium values of GDP and the price level. Again, show your work.

(c) (8 pts.) The equation showing the relationship between exchange rates and interest rates is $1/e = 350-\beta*i$, with $\beta=20$ in the model you solved. Would the effectiveness of fiscal policy increase or decrease as β increased? (Remember the (-) sign in front of β.) Answer without solving the model again, using proper economic reasoning. You will receive points for the explanation, not for correctly guessing "increase" or "decrease".

Bonus:

What was the US current account deficit in 2010 in dollars? (2 pts.)

What was it as a percentage of GDP? (3 pts.)