PROBLEM SET 1
(Due February 22)

Questions 1-6. Answer True, False, or Uncertain. Briefly explain your answer. No credit without explanation (5 points each).

1. Government budget deficits lead to current account deficits.

2. ‘Overshooting’ of the exchange rate cannot occur if asset markets are always in equilibrium.

3. Overshooting of the exchange rate cannot occur if investors have ‘rational expectations’.

4. According to the theory of Purchasing Power Parity, high inflation countries should have depreciating currencies.

5. In open-economies with flexible exchange rates, monetary policy is less effective at changing the level of output than it is in closed-economies.

The following questions are short answer. 10 points each.

6. Suppose the 12-month forward price of the dollar in terms of yen is 144 yen per dollar. Suppose the spot price of the dollar in terms of yen is 160. Next, suppose that currently the annual interest rate on yen deposits is 4%, while the interest rate on a comparable dollar deposit is 12%. There are no transactions costs. Is there an arbitrage opportunity here? If so, explain exactly how you would take advantage of this situation to make riskless profits.

7. There is an article on the class webpage by Brad DeLong, entitled Should We Still Support Untrammelled International Capital Mobility? Or are Capital Controls Less Evil than We Once Believed? In this article DeLong argues that NAFTA has been good for Mexico in the sense that it is now running a trade surplus with the United States, but it has also been bad because on net Mexican capital is flowing into the United States, rather than staying in Mexico to help finance domestic investment.

Using your knowledge of Balance of Payments accounting, explain why Mexico cannot have it both ways, i.e., have a trade surplus and a net capital inflow from the United States. (Assume the U.S. and Mexico are the only two countries in the world).

8. Suppose there is a reduction in aggregate money demand (i.e., an inward shift of the aggregate real money demand function). Illustrate the short-run and long-run effects on the exchange rate, interest rate, and price level.
9. Consider a country with a flexible exchange rate. Suppose there is a temporary fall in demand for the country’s output. Using the DD-AA model, illustrate the effect on domestic output and the exchange rate. To stabilize output, what government policy response would you recommend? How does your choice affect the domestic distribution of income?

10. One way to interpret what Central Banks do is to think of them as solving a “signal extraction” problem. They look at market interest rates and try to decide whether they are changing because of changes in (real) money demand or because of changes in expected inflation. If the Central Bank wants to achieve a steady inflation rate (or price level), it should accommodate money demand changes (e.g., increase money supply in response to increases in money demand), but should not accommodate changes in inflation expectations (i.e., cause more inflation just because people expect inflation).

Suppose you are head of the central bank, and you see market interest rates start to rise. Should you increase the money supply in order to bring them back down, or should you hold the line, in order to prevent future inflation? How could you use information from the foreign exchange market to help you decide?