QUESTION 1.  CURRENCY CRISSES (35%)

1. Suppose that the demand for pesos by holders of dollars is given by

\[ Q_d = 50 - 2E \]

while the supply of pesos by agents wanting to hold dollars is given by

\[ Q_s = 20 + 5E, \]

where E = dollar price of one peso.

a) Solve for the market equilibrium exchange rate, E.

b) Suppose that the Mexican central bank sets a fixed exchange rate of E = 2. What is the dollar value of the official reserve loss or gain per period for the central bank? Is the peso overvalued or undervalued at E = 2?

c) Suppose that the central bank is concerned about high inflation. Will it be tempted to raise or reduce E from an initial peg of E = 2?

d) Suppose now that the central bank sets a new peg of E = 5. What is the dollar value of official reserve gain or loss now?

e) Is the new peg sustainable? Is the new peg more sustainable than the original peg of E = 2? Explain.

2. Explain what a currency board is, listing its key characteristics. List the main differences between a currency board and a central bank with a fixed exchange rate target.

3. For what reasons can a currency board fail to maintain convertibility of a country’s currency? Will this necessarily lead to the abandonment of a fixed peg for the exchange rate? Why or why not?

4. Research and describe the history of the currency board in Argentina. Why did this currency board fail? (Two pages maximum).
QUESTION 2. SOVEREIGN DEBT CRISES (35%)

1. Write down and explain the budget constraint faced by a government which finances its consumption spending with a combination of tax revenues (on national income - GDP) and debt - “discount bonds” - held by international investors. Allow for the government to potentially default on its debt, and for a permanent total factor productivity loss in the event of default. This is the same government budget constraint that we have studied in class.

2. Using the budget constraint that you have written down, describe carefully the conditions under which there is a larger incentive to default for the government. What factors in the model mitigate/act to reduce this incentive?

3. In the model there is a “sunspot” variable. How do we interpret this variable? What role does it play?

4. Explain the three types of equilibrium that exist in this model. Under what circumstances will the government default on its debt in equilibrium? What do we mean by “self-fulfilling debt crises”? Are all debt crises that can arise in the model “self-fulfilling” in nature?

QUESTION 3. SOVEREIGN DEBT CONTRACTS (30%)

1. Recall the simple two-period model that we studied in class (Obstfeld and Rogoff, Ch. 6). Write down the maximization problem of a typical foreign insurer, in the absence of incentive compatibility. Explain the incentive problem confronted by the insurer.

2. What do we mean by the “full insurance contract”? In what sense does this contract fully insure an agent, and which agent does it fully insure?

3. Is the full insurance contract optimal? Explain, being careful to identify for which agent it is optimal. Is there any incentive for the small economy to default on the contract?

4. What conditions are needed to render the insurance contract compatible with the incentive of the small economy to satisfy contractual payments? Write these conditions down, and explain them carefully.