Second Midterm Examination

Part I. (180 pts. in total) Answer as directed on question sheets.

1. (20 pts.) Consider the following information on prices and quantities in a certain economy (with two goods, X and Y) in 1990 and 1995. Fill in the blanks and explain what you did.

<table>
<thead>
<tr>
<th>Year</th>
<th>X₁</th>
<th>X₂</th>
<th>P₁</th>
<th>P₂</th>
<th>Nominal GDP</th>
<th>Real GDP in 1990 dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>20</td>
<td>40</td>
<td>30</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>23</td>
<td>44</td>
<td>40</td>
<td>60</td>
<td></td>
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</tbody>
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By what percentage did nominal GDP increase over the period from 1990 to 1995? (Show work.)

By what percentage did real GDP in 1990 dollars increase from 1990 to 1995? (Show work.)

What is the value of the 1995 GDP deflator, using 1990 prices as a base? (Show work.)
2. (18 pts.) In the national income accounts, National Saving is the sum of __________ saving and ______________ savers saving. (Fill in the blanks.) The text (in chapter 25) explains that private investment could be increased by reducing taxes on either savers or investors. In this context, what do economists mean by the term "investors"?

In the accompanying diagrams, show the demand and supply of loanable funds. Briefly explain who the demanders and suppliers of loanable funds are.

In your diagram, show the effect on the amount of saving, the amount of investment, and the interest rate in response to a policy such as an investment tax credit (or more accelerated depreciation). Explain.

Real interest rate

<table>
<thead>
<tr>
<th>Real interest rate</th>
<th>Quantity of loanable funds</th>
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<tbody>
<tr>
<td></td>
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</table>
3. (18 pts.) Suppose members of the public decide to hold a larger fraction of their money in the form of cash, rather than demand deposits. (They don't want to hold less money. They just want to change the mix.) How could this set in motion a process that would result in a reduction in M1? What actions would members of the public take to start the process, and how would it end up reducing the amount of money in the system? What actions could the Fed undertake to counteract this M1-reducing process? Be specific. Be sure to explain why the Fed's actions counteract the process you described.
4. (18 pts.) Mankiw uses the "Quantity Equation" (sometimes called the "Equation of Exchange") to explain the *long run* effects of an increase in the quantity of money. State the Quantity Equation and define each of the letters in it. (Hint: the letters, in alphabetical order, are M, P, V and Y.)

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How does the Quantity Theory of Money use the Quantity Equation tell the story of the long run effect of an increase in the quantity of money? Explain.

5. (16 pts.) Mankiw mentions six "true" costs and one "phony" cost of inflation. List and explain any four of the six true costs. State the phony one and explain why it is phony.
6. (18 pts.) Explain the idea of "Purchasing Power Parity" (PPP)? What reasons are there to believe that PPP might hold (at least approximately)? What keeps it from holding precisely at all times?
7. (18 pts.) Mankiw argues that a policy of restricting imports of a particular product (say cars) would have no long run effect on the dollar value of U.S. Net Exports. Use the 3-panel model of an open economy to show Mankiew's point. To explain Mankiw's idea, first show an equilibrium of the system. In this model, what determines the equilibrium dollar amount of net exports?

Then show how things change when the restriction on imports of cars is put in place. Explain what you did.

If trade policy can't change the balance of trade, what would change it?

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8. (18 pts.) Suppose the Fed engages in an open market operation that results in an increase in the money supply. Explain the channels by which this could be expected to have an effect on the location of the aggregate demand curve. (Which components of aggregate expenditure would we expect the operation to have an impact on? Why?)

The diagram below shows an economy in long run equilibrium. Locate the equilibrium price level and level of real GDP. Now continue the story you began above, showing the new (shifted) AD curve, and showing how the economy would respond to that change in the short run and in the long run. Explain what you did.
9. (18 pts.) Care what is meant by the term "Phillips Curve." State the policy implication that was originally drawn from Phillips' work. How did Friedman and Phelps criticize the notion of the Phillips curve? What was the basis for their criticism, and what predictions did they make? What part of the original Phillips curve idea do most economists still accept? What part do most economists today not accept? Explain.
10. (18 pts.) Pick one of the five macroeconomic debates Mankiw discusses in Chapter 34 and discuss the pros and cons of the issue. (As an alternative, you may pick a different macroeconomic issue and discuss both sides of this issue. Note: if you choose this option, you must state that you have declined to discuss one of Mankiw's issues and carefully state your issue. In that case, your answer will be judged partly by the "meatiness" of the issue, and partly on the basis of how you analyze the issue.)

Part II. of the exam begins on the next page, which is numbered 1. For each question, circle the letter of the one best answer. Each question counts 2 pts.