ECON 201: Principle of Macroeconomics  
Name: __________________

Fall 2004  Bellas

Second Midterm
You have two hours and thirty minutes to complete this exam. Answer all questions, explain your answers, label axes and curves on graphs and do your own work. Fifty points total, points per part indicated in parentheses.

1. If you are at all surprised by this first question, then you haven’t been paying attention. Imagine an economy described by the following equations:

\[ C = 1600 + 0.5Yd \]
\[ I = 300 \]
\[ G = 100 \]
\[ NX = -200 \]

A. Calculate equilibrium GDP if \( T = 100 \). (3)

\[ Y = C + I + G + NX \]
\[ Y = 1600 + 0.5(Y - 100) + 300 + 100 - 200 \]
\[ Y = 1750 + 0.5Y \]
\[ MPS = 0.5 \]
\[ Y = 3500 \]

B. How will equilibrium GDP change if \( G \) increases to 200%. (3)

The MPS is 0.5, so the expenditure multiplier is 2.

If \( G \) increases from 100 to 200 (an increase of 100) then \( Y \) will increase by 200.

C. Calculate equilibrium GDP if \( T = 0.5Y \) (3)

\[ Y = C + I + G + NX \]
\[ Y = 1600 + 0.5((1-0.50)Y) + 300 + 100 - 200 \]
\[ Y = 1800 + 0.25Y \]
\[ Y = 2400 \]

D. Would the expenditure multiplier be larger or smaller if imports were a function of \( Y \)? (3)

This would make the multiplier smaller because it would make the MPS smaller.
2. In two aggregate expenditure graphs, show how a larger or smaller value of the multiplier affects the result of an increase in aggregate expenditures. Be sure to label curves and axes. (3)

<table>
<thead>
<tr>
<th>Smaller MPSp</th>
<th>Larger MPSp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flatter AE Line</td>
<td>Steeper AE Line</td>
</tr>
<tr>
<td>Smaller Expenditure Multiplier</td>
<td>Larger Expenditure Multiplier</td>
</tr>
<tr>
<td>Smaller Change in Equil. Y</td>
<td>Larger Change in Equil. Y</td>
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</tbody>
</table>

![Aggregate Expenditure Graphs](image)

3. The chapters from the O’Rourke book on Tanzania and Hong Kong discuss, among other things, tax rates and tax revenue. Explain why raising tax rates may actually reduce tax revenue. (3)

If tax rates increase, there will be less incentive for people to work hard, take chances and start businesses.

There will also be more incentive to hide income from the government to avoid paying taxes on it.
4. How might a government carry out…. 

A. expansionary fiscal policy? (3) 

Through increases in government spending or cuts in taxes.

B. contractionary fiscal policy? (3) 

Through tax increases or government spending cuts.
5. Explain what is meant by supply side economics and offer two examples of supply side fiscal policies. (3)

Supply side economics suggests using fiscal policy to try and shift the AS curve. Basically, to try and shift AS, by giving people increased incentives for work.

Policies along these lines include:
1. Lower personal income tax rates – to get people to work more
2. Reduced taxes on income from savings – to increase savings and investment
3. Reduced taxes on capital gains
4. Reduced taxes on corporate profits
5. Education tax credits
6. Show the effect of the following events on the aggregate expenditure model. Use only the AE graph in answering this question. Be sure to label your axes and curves, and the 45° line.

A. An increase in interest rates. (3)

B. An increase in the price level. (3)

C. An increase in income tax rates. (3)
7. Discuss briefly how the expenditure multiplier works to convert an $100 increase in government spending into a much larger increase in equilibrium GDP. (3)

The initial expenditure goes to the people that supply the government with whatever it is it purchased. The people who get the money go out and spend it on other things, thus adding to the increase in GDP. The people who get this money go on and spend it themselves and so on and so on…. 
8. Money and banking are fun topics.

A. How are the ideas of legal tender and fiat money linked? (3)

Fiat money is money that has no intrinsic value and is only accepted because it is legal tender, that is it is only accepted because it must, by law, be accepted as payment.

B. Explain how banks create money in a fractional reserve banking system. (3)

When a person deposits some money, they lend out some portion of that money to another person. Thus, the first person has the money and the second person also has some of the money. In some sense the money is duplicated by the bank, but actually it is creation of money.
9. List the fiscal and monetary policy moves that might be appropriate if an economy was in a severe recession. (5)

Fiscal:
- tax cuts
- government spending increases

Monetary:
- purchase of bonds by the Fed
- lowering of the discount rate by the Fed
  - not reductions in required reserves.