Write your name on the cover of the test booklet and nowhere else.  Enclose this sheet with the booklet.  The Excel file will be handed in via Moodle.  Your name will only appear on a page of the file that has nothing else on it.  Failure to follow these directions will cost you 1 point.  The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes (but you can take the full 2 hours.)  Therefore, expect to spend 1 minute for every 2 points.  For example, a 14-point question should take 7 minutes.

**Remember to fill out course evaluations.**

1) (14 points) For EITHER the event in Part A OR the event in Part B, determine how the event affects the monetary base, the money multiplier, and the money supply.  Explain your logic.
A) The Fed increases the discount rate.
B) People decide to keep less of their liquid money as cash.

2) (14 points) Answer EITHER Part A OR Part B.
A) For the balance sheet to the right, how much excess reserves does the bank have?  Show all work and briefly explain your logic.  What are the "loans" on the right-hand side of the balance sheet?  Explain your logic.
B) Explain the process by which the Fed's

| Assets | | Liabilities & Net Worth | |
|--------|--------|--------|--------|
| Deposit at Fed | $20 | Checking Deposits | $150 |
| Cash in vault | $10 | Misc | $40 |
| Loans | $170 | Loans | $10 |

buying $10,000 worth of bonds will result in a greater change in the money supply.  In other words, what is the economic reason why the money multiplier is not equal to 1?

3) (16 points) Answer EITHER Part A OR Part B.
A) Draw the diagram of the official exchange rate and the fundamental exchange rate for the USA, with Japan as the other country.  Illustrate the effects of Japan increasing their money supply.  Explain why the curve(s) moved as drawn.  What happens to the money supply in the USA?  Why does that happen?
B) Draw the diagram of the official exchange rate and the fundamental exchange rate for the USA with Mexico as the other country.  Suppose the money supply was to the right of the equilibrium.  What happens to move the money supply and exchange rate back to the equilibrium?  Explain the economic reasons why that occurs.

4) (20 points) Answer EITHER Part A OR Part B.
A) Suppose the government spends $500 per year, makes transfers of $450 - 1% of GDP per year, and pays $110 of interest per year.  The tax revenue is 20% of GDP.  If GDP is $4500, then how much is the government deficit or surplus.  Suppose the full-employment level GDP is $5500.  How much is the full-employment deficit or surplus?  What is the primary deficit or surplus?  Show all calculations.  Is the government doing good fiscal policy?  Explain your logic.
B) You do not need to know what a "land value tax" is to answer this question. Many economists (Smith, Ricardo, and George in particular) have argued that the best tax is the "land value tax."  That is slightly different from the property tax.  Explain why the property tax is a good tax.  What is the problem with that logic?  How can the property tax be modified to improve the tax from an economist point of view.

5) (36 points) Use the data in the Excel file exam4.xlsx to seasonally adjusted sales for all periods.  Then forecast sales through the end of 2016.   If their sales for 2016 were $1500, then how much would they expect to sell in March of 2016?  Do all calculations in the Excel sheet.  If you want to explain anything, then do it on the spreadsheet.