Whitman College
Econ 308
Exam 3
April 27, 2012

Write all answers in your blue book. Show all of your work. The exam ends at 2:20.

1. Consider the following excerpts from the Wall Street Journal.

Wall Street Journal Friday, April 27, 2012

BOJ Plans To Boost Bond Purchases

By Tatsuo Ito and Megumi Fujikawa

TOKYO—The Bank of Japan (BOJ) stepped up its fight against deflation on Friday by saying it will boost the volume of government bonds it purchases…

Japan's finance minister on Friday welcomed the BOJ's latest monetary easing steps, but he was quick to remind the bank that it may need to do more to beat deflation and bring about its promise of 1% inflation.

Yesterday (Thursday April 26, 2012) the exchange rate was 80.9383 yen per U.S. dollar. For parts (a) and (b) below, suppose people expect prices on average in the United States to rise 2.7% annually.

(a) (10pts) Suppose that yesterday people expected prices on average in Japan to decline by 0.5% over the coming year. If Purchasing Power Parity held, what did people expect the yen/dollar exchange rate would be one year later?

(b) (5pts) Today the Bank of Japan "stepped up its fight against deflation" by announcing monetary easing measures. Suppose that because of those measures, people now expect prices on average in Japan to rise by 1.0% over the coming year. If Purchasing Power Parity holds, what do people now expect the yen/dollar exchange rate will be one year from now?

2. Consider the following excerpts from the Wall Street Journal.

Wall Street Journal April 26, 2012

Gulf States Keep Oil Dollars Home

By Asa Fitch and Liam Pleven

Booming oil prices are flooding Arab countries with money, but where the lion's share of that wealth would once have been pumped into the world's financial markets, much of it is now being spent at home. Gulf states are embarking on their biggest spending spree on record as they lavish funds on domestic projects—from new housing and hospitals to mosque restoration and job creation—largely as a defensive response to the Arab Spring uprisings that toppled other Middle East governments last year…

New patterns of spending are also pushing government budgets through the roof…Now Gulf countries like Saudi Arabia and the U.A.E. need ever-higher oil prices to help balance their budgets. Saudi needs crude oil to trade at about $80 a barrel or more, and the U.A.E. needs it to be at around $90 in order to balance their budgets at current spending levels…

(10pts) Because oil prices are high now, Saudi Arabia is currently running a federal government budget surplus despite its "lavish" government expenditures. Saudi Arabia is also running a trade surplus now. Suppose that oil prices drop but Saudi Arabia continues its lavish government spending, so that Saudi Arabia runs a government budget deficit. Using the National Income and Product Accounts equation, explain whether this government budget deficit would necessarily result in Saudi Arabia also running a trade deficit.

3. Consider the following excerpts from the Wall Street Journal.

Wall Street Journal March 29, 2012

Bernanke Defends Fed's Crisis Moves

By KRISTIN PETERSON and JEFFREY SPARSHOTT

Federal Reserve Chairman Ben Bernanke ended his college lecture series with a vigorous defense of the central bank's two rounds of bond buying to bolster the economy after the 2008 financial crisis. The Fed's purchases of Treasury securities and mortgage-backed securities were "generally successful" in lowering interest rates and helping to support economic growth, Mr. Bernanke said Thursday…

Fed officials haven't been uniformly supportive of the asset purchases. Critics… have worried the programs could stoke inflation. Mr. Bernanke addressed the inflation concerns Thursday, saying, "We've been quite successful in keeping inflation low."…

The Fed isn't worried about its ability to reverse the effects of the bond-buying programs when the economy picks up and it's time to tighten credit to keep inflation under control. Mr. Bernanke cited several ways the central bank could cause interest rates to rise when that time comes. These include selling assets and raising the interest rate it pays on the reserves that banks hold at the Fed…

As you work through (a) and (b) below, use the fact that the Fed's current Federal Funds Rate target is 0.25%, the current discount rate the Fed charges banks for loans is 0.75%, and the current interest rate that the Fed pays on reserves banks hold at the Fed is 0.25%.

Consider options that Mr. Bernanke says would allow the Federal Reserve to raise interest rates, thereby keeping inflation under control "when the economy picks up and it's time to tighten credit."

(a) (5pts) Consider the "selling assets" option. Draw a graph of the Federal Funds Market (FFM) for short-term loans between banks that have more excess reserves than they want and banks that have less in excess reserves than they want. With reference to your graph, explain how Fed open market sales would affect the supply of loans of excess reserves and the demand for loans of excess reserves in the FFM. Explain what would happen to the interest rate in this market (the Federal Funds Rate), and show that change on your graph.

(b) (5pts) Suppose that instead of selling assets, the Fed uses the option of "raising the interest rate it pays on the reserves that banks hold at the Fed." Suppose the Fed raises that rate from 0.25% to 0.50%, while keeping the discount rate at 0.75%. Draw another graph of the FFM. With reference to your new graph, explain how the increase in the rate the Fed pays on reserves would affect the supply of loans of excess reserves and the demand for loans of excess reserves in the FFM. Explain what would happen to the Federal Funds Rate, and show that change on your graph.

(c) (15pts) Use the Keynesian IS-LM model to analyze what happens when the United States reaches the point where the economy "picks up and it's time to tighten credit to keep inflation under control." Show the results of the Federal Reserve's credit-tightening actions, and explain your analysis. On your IS-LM graph, be sure to indicate potential real Gross Domestic Product. Thoroughly explain any shifts you make in any curves.

4. Read parts (a) and (b) before you answer either.

(a) (15pts) With reference to a Keynesian Cross diagram, discuss how a tax increase would affect real aggregate output in the Keynesian Cross Model. Refer to the concept of the tax multiplier in your discussion, and show on your graph the tax multiplier effect.

(b) (15pts) Explain how the tax increase that you described in part (a) would affect real aggregate output and interest rates in the Keynesian IS-LM model. Show the effect on an IS-LM diagram. In your explanation, discuss whether an identical tax increase has the same effect on real aggregate output in the Keynesian Cross and IS-LM models, and why.

5. Read parts (a) and (b) before you answer either.

(a) (10pts) Use the IS-LM model to derive an Aggregate Demand curve. Explain your work.

(b) (10pts) On a new graph, redraw your Aggregate Demand curve from part (a). Suppose now that the Central Bank tightens credit conditions at the same time that fiscal policy also tightens using a tax increase. Derive the new Aggregate Demand curve under this combination of policies, and add it to your graph. Explain your work.