International Economics and Business Dynamics. Sample of exam questions

1. **Japanese Government Debt**
   A commentator recently wrote: "The interest rate on Japans ten-year government bonds is now less than 1% the lowest in the world, despite a very high level of government debt and annual budget deficits. Indeed, Japans debt is now roughly 230% of GDP, higher than that of Greece (175% of GDP) and nearly twice that of Italy (125% of GDP). The annual budget deficit is nearly 10% of GDP, higher than any of the eurozone countries. With nominal GDP stagnating, that deficit is causing the debt/GDP ratio to rise by 10% annually. The commentator argues that the cause of such a low interest rate of Japanese government debt is given by two factors: price deflation and expectation of Yen appreciation.

   Explain why these two factors affect interest on Japanese Bonds

   What would be the effect of the recently announced very expansionary Japanese Monetary Policy on the interest on Japanese Government Bonds? Why?

2. **International Trade**
   Some have argued that, should Greece abandon the Euro, one of the sanctions imposed on the country would be exclusion from trade. In this question you are asked to evaluate the consequences of this using the Ricardo's trade model. Suppose that Greece has 1000 workers and that each worker can either produce 1 liter of olive oil or 1 liter of wine

   (a) Plot the production possibility frontier for Greece

   (b) Suppose that Greece is currently trading in world markets, that the world price of a liter of wine is 2 dollars and the world price of a liter of oil is 1 dollar. What would Greece produce? Suppose Greece consumes 600 liters of wine. Compute its consumption of olive oil

   (c) Now suppose that Greece stops trading with the rest of the world. Show that they are worst off relative to the situation when they were trading

3. **Current account after the great recession**
   After the great recession US private consumers have increased their saving rate, US government has reduced its saving rate and US enterprizes have reduced their investment rate. Discuss how each of these three changes is going to affect the US current account.

4. **Monetary Policy at the zero bound**
   The Chief economist at Goldman-Sachs recently said: *"One of the big lessons that weve taken away from the past few years is that the zero lower bound on nominal short-term rates is a really big deal because it does get quite a bit more difficult for central banks to provide stimulus once youve hit that zero bound"*

   (a) Explain what is the nominal short term rate and why it cannot go below 0%

(b) Right now the Federal Funds Rate in US is 0%. Suppose that the US economy moves from 0% expected inflation to a 2% expected deflation. What happens to the real interest rate? What happens to aggregate demand? What happens to GDP?

(c) According to the quantity theory of money higher growth rate of money leads to higher inflation. Explain why, when the federal funds rate is 0%, increases in growth rate of money do not necessarily lead to increase in inflation.

5. **Disney Dollars**
Disney has recently created a new currency, the Disney Dollar. It currently coexists with US Dollar at Disney theme parks. To encourage the use of Disney Dollars, in the parks all prices are quoted in Disney Dollars and all transactions must use Disney Dollars. Disney buys and sells 1 Disney Dollar for 1 US dollar.

a) Soon after Disney issues its dollars local retailers around the parks begin accepting it. Disney finds its supply shrinking and must print more. Printing a Disney dollar costs 1 cent. Mickey Mouse, angry about this extra expense, demands Disney ban the use of its dollars outside its parks. Explain to Mickey why Disney should actually encourage the use of the Disney Dollar outside the park.

b) Based on the success of the Disney Dollar, Disney decides to issue local currency for its Paris and Tokyo parks - the Disney Euro and Yen. As with the Disney Dollar they fix each currency at par with its local currency counterpart (i.e 1 Disney Yen gets 1 Japanese yen, 1 Euro gets 1 Disney Euro). Disney is aware that many of its customers visit multiple parks and so they would like to fix the exchange rate between Disney Dollars, Yen and Euros. Can Disney achieve that? If yes, how, if not, why not?

6. **Redistribution and aggregate demand**
Some economists advocate using redistributive tax policy (i.e. taxing high income households and using the proceeds to redistribute to low income households) on the ground that it increases aggregate demand. Under what assumptions that is true? Under what assumptions increase in aggregate demand would increase GDP? Suppose that a government puts in place a more redistributive system: can you argue that even if it might increase aggregate demand in the short run it might decrease GDP in the long run?

7. **Conflict in North Korea**
Suppose that, due to increasing tension between the two Koreas, North Korea starts a massive increase in military spending. Suppose that the government of North Korea, due to the poverty of population, cannot issue bonds nor it can raise taxes to finance the spending so it finances the spending by asking the central bank to print money at a faster rate. Suppose also that the increasing growth rate of money supply has no effect on real GDP growth in North Korea

(a) What do you think will happen to inflation, nominal interest rates and nominal exchange rates in North Korea? Explain why.

(b) Suppose that printing money costs 0. Who is bearing the real cost of the military build-up?

8. **Fixing the exchange rates**
Suppose the Swiss Central Bank announces that they are going to fix the exchange rate

of the Swiss Franc with the Euro at 1 (i.e. 1 SF for 1 Euro). Suppose that after the announcement the interest rate on SF denominated bonds is 4% and the rate on German Euro denominated bonds is 2%. Suppose that for both bonds there is no risk of default.

(a) Do the market expect the exchange rate is going to stay fixed? Why or why not? If not in which directions they expect it to move.

(b) Briefly explain why central banks which promise fixed exchange rate policies sometimes are not able to maintain those promises.

9. **Predicting business cycles**
Explain what is the shape of the yield curve and why it is good predictor of the future state of the business cycle.

10. **Evaluating long run growth**
Suppose you are evaluating the performance of two countries. You know that both countries have the same technology for producing output Y, which is given by $Y = AK$ where A is TFP and K is capital stock. Suppose that the countries have the same depreciation rate of capital and 20 years ago they started with the same level of capital stock. Suppose that in both countries, over the past 20 years, output has grown at 5% per year, but in country 1 capital has grown at 4% per year while in country 2 capital has grown at 1% per year.

(a) Compute TFP growth in both countries

(b) Which country would you expect to have higher consumption growth? why?