1. Read chapters 21 and 22 from Hubbard and O’Brien.

2. Define “Potential GDP” “Convergence Hypothesis” “Business Cycle” “Long-run growth” “Human Capital” and “Productivity” with one or two sentences each. Do not use the definitions in the book; provide your own definitions in a way anyone can understand.

3. What is the macroeconomic production function? What inputs does it use? What is the output?

4. Describe to someone who knows no economics the determinants of long-term growth and what the government can do to make sure that Turkey has a fast growth rate.

5. Discuss in a few sentences whether a central bank and/or the government can make an economy grow (in real terms) faster than its trend at all times. If so, mention how.

6. What role do the financial intermediaries play? Do they directly add to the GDP? What do they produce? Assume that 1% of the Turkish GDP is created by financial intermediaries (The number is not correct. Can you find the correct number?). Would this imply that if all financial intermediaries closed down GDP would fall by 1%?
7. Use the Penn World Tables data to find real per capita GDP of Turkey and South Korea in dollars from 1953 to 2004. Plot the data in one graph using Excel. Write a paragraph about the relative growth rates of Turkey and South Korea. What has happened? Why do you think these countries have had such different experiences over the past 50 years?

8. Read *The Economist* of the week of February 16, 2010. Write a paragraph on the article “New Dangers for the World Economy”. (Write only a paragraph as part of your homework, not a separate essay.)

9. (BONUS QUESTION) Again using the Penn World Tables, calculate the average annual population growth rates of the 190 countries for which the data is reported, over the 1975-2005 period. Also calculate the average per capita real GDP growth rates of these countries over the same period. (You’ll be able to do this for 164 countries as some countries have missing data for the early years.)

   a) What is the average population growth rate across all countries over this period?
   b) What is the average per capita real GDP growth rate of the countries that had population growth rates below the average and what was the average per capita real GDP growth rate of the countries with population growth rates above the average?
   c) What was the average real GDP per capita in 2005 for the countries which had population growth rates below the average and what was the average for countries with population growth rates above the average?
   d) Based on your answers to (b) and (c), comment on the prime minister’s plea for each woman to have three children. (Do this based on economic reasoning.)

Make sure that you properly refer to your data sources. Someone else must be easily able to exactly reproduce your data using your reference. Save the data you collected, you’ll need them later in the semester.