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College of Arts and Sciences
Department of Economics
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Fall 2010, Intermediate Macroeconomics, section 4

ECON 2202 Mid-term exam II

Name:

General recommendations:

- Read questions thoroughly and answer each.
 - Work individually.
 - There are four pages.
 - No documentation, cell phones, pagers, calculators and bathroom breaks.
 - You have until 10:45 and can leave early, if you wish.
1. **[30%]** Circle the correct answer to each of the following questions. Note that there may be several correct answers.
- (a) In the intertemporal model of the business cycle, increasing the deficit of the government leads to
 - i. an increase in current consumption;
 - ii. an increase in future consumption;
 - iii. an increase in savings;
 - iv. a decrease in savings.
 - (b) If there is an increase in the interest rate,
 - i. labor demand increases;
 - ii. labor supply increases;
 - iii. labor demand decreases;
 - iv. labor supply decreases.
 - (c) For PAYG social security to be sustainable, the following needs to hold:
 - i. inflation needs to be lower than the real interest rate;
 - ii. the population growth rate needs to be higher than the real interest rate;
 - iii. the interest rate needs to be higher than the depreciation rate;
 - iv. the population growth rate needs to be lower than the depreciation rate.
 - (d) An predictable increase in future total factor productivity leads to
 - i. an increase in labor demand;
 - ii. a decrease in labor demand;
 - iii. an increase in investment demand;
 - iv. a decrease in investment demand.

- (e) A decrease in current government expenses with a corresponding increase in future government expenses leads to
 - i. a decrease in consumption demand;
 - ii. an increase in consumption demand;
 - iii. a decrease in consumption;
 - iv. an increase in consumption;
- (f) In the intertemporal model of the business cycle, an increase in future taxes and future government expenses leads to
 - i. an decrease in consumption demand;
 - ii. no change in consumption demand;
 - iii. a small increase in consumption demand;
 - iv. a large increase in consumption demand.

2. [15%] Credit market frictions

- (a) Explain in which way the value of real estate has an impact on consumption. How would this be different that the value of other assets, like stocks?

- (b) Banks now customarily use credit scores to evaluate a borrower's creditworthiness and whether to lend him funds. Using the model seen in class, what would be different if the banks could not use this information?

3. **[35%]** Intertemporal model of the business cycle.

- (a) Suppose that there is a loss of current capital. Explain in words what the impact of this would be for the firm.

(b) Explain this as well for the household.

(c) What is now the impact on the whole economy in general equilibrium?
Provide graphs.

- (d) What is the impact on endogenous variables? Would shocks to capital be a good explanation of observed business cycles? Explain.

4. [20%] Consumption

- (a) Explain why consumption is usually less volatile than income in the intertemporal model of the business cycle.

- (b) Suppose a pay-as-you-go social security system is introduced, and conditions are so that there is a Pareto improvement for every generation. Explain why this is so, distinguishing the first generation from the subsequent ones.

[Bonus: 10%] Do the welfare theorems (the equivalence of central planning and decentralized optimization of economic agents, or communism = capitalism) still hold in our latest model? Why? If yes, then why are we not using the approach with the production possibilities frontier? If no, how different would outcomes look like in centralized planning?