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**Spring 2006, Intermediate Macroeconomics, section 2**

## **ECON 219 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 9:15 and can leave early, if you wish.
1. [35%] Circle the correct answer to each of the following questions. Note that there may be several correct answers.
- (a) The Malthus model predicts that:
    - i. population keeps increasing;
    - ii. the standard of living keeps increasing;
    - iii. health improvement increase the standard of living;
    - iv. population control improves the standard of living.
  - (b) Looking at long run data, which of the following is true?
    - i. relatively rich countries converge;
    - ii. real interest rates exhibit not trend in the log run;
    - iii. the capital output ratio is gradually decreasing;
    - iv. output per capita is steady.
  - (c) If future government expenses increase,
    - i. labor demand increases;
    - ii. labor supply increases;
    - iii. consumption demand increases;
    - iv. investment demand increases.
  - (d) Suppose a relatively poor economy gradually gets closer to the equilibrium in the Solow growth model. What happens?
    - i. the rate of return of capital is steady;
    - ii. consumption per capita increases;
    - iii. the savings rate is constant;
    - iv. capital grows as fast as population.

- (e) Consumption demand depends on the interest rate because:
- i. households make an intertemporal choice between future and current consumption;
  - ii. households make an intertemporal choice between savings and current consumption;
  - iii. of the opportunity cost of money;
  - iv. the interest rate changes the value of life long wealth.

2. [15%] Growth theory

- (a) Explain what the fundamental mechanism is that leads to a stable population in the Malthus model. That is, what ingredients of the model, if left out, would make that population would not be constant.

- (b) Suppose an economy is at the long run equilibrium in the Solow growth model. What happens in the long run if the savings rate increases? Justify with a graph.

3. [10%] There are four variables in the government's problem:  $G$ ,  $G'$ ,  $T$ ,  $T'$ . Which are exogenous, endogenous? Explain your answer.
4. [40%] Suppose an economy is hit by an increase in current total factor productivity.
- (a) With the intertemporal model of the business cycle with investment, show what the impact ought to be on all macroeconomic variables. Do not take into account the impact on profits.

(b) Can such shocks be a good explanation of cyclical fluctuations?

(c) Give three “real world” examples that could lead to such a change in total factor productivity.

5. **[Bonus: 10%]** How would your analysis of the impact of an increase in total factor productivity change once you take into account its impact on profits?