

Given name:\_\_\_\_\_ Family name:\_\_\_\_\_

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**UNIVERSITY OF TORONTO**  
**Faculty of Arts and Science**

**ECO362 (Economic Growth)**  
Instructor: Kripa Freitas

**FINAL**  
**April 19, 2013**

**Duration: 3 hours**

**No Aids allowed**

This examination paper consists of 14 pages and 4 questions. Please bring any discrepancy to the attention of an invigilator. The number in brackets at the start of each question is the number of points the question is worth.

Answer all questions.

This is a closed book, closed notes exam. All diagrams need to be clearly labeled and you must give arguments to support your answers for full credit.

For graders' use:

	Score
1 (20)	
2 (25)	
3 (27)	
4 (28)	
Total (100)	

1. Growth models

- (a) [5] What are the important assumptions that differentiate the Malthus model from the Solow Model?

- (b) [15] Prior to the industrial revolution average per capita income growth rates were close to zero in the world. However there were fluctuations (positive and negative) in per capita incomes, due to things like plagues/good harvests etc. How can we understand growth in the pre-industrial world through a model? Explain your answer using diagrams, equations and please explain the intuition behind your reasoning.

*Space for answer continues on next page*

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2. Consider the Solow model where the production function is given by  $Y_t = AK_t^\alpha L_t^{1-\alpha}$  where productivity ( $A$ ) is a constant and Investment rates ( $\gamma$ ), population growth rates ( $n$ ) are also constant
- (a) [10] Solve for the steady state per capita income ( $y^{SS}$ ), starting from the capital accumulation equation  $K_{t+1} = (1 - \delta)K_t + I_t$  *Question continues on next page*

(b) [5] Why do we reach a steady state in per capita income ( $y$ )? Explain the intuition using words.

(c) [10] The country of Berk is currently poor. A politician puts forward a bill to encourage investment with the justification that higher capital investment rates is the only way Berk will be able to achieve sustained long run growth. Do you think the politician is right in the context of the Solow model considered in this question? Explain your reasoning. *Space for answer continues on next*

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3. Openness and Inequality

- (a) [10] In his article "How Far Will International Economic Integration Go?" Dani Rodrik discusses the trade-off implicit in ways the world can achieve international economic integration in goods and factor markets. Discuss his view on how the world will achieve it. *Question continues on next page*

- (b) [7] How does openness to capital flows affect how inequality affects factor accumulation (focus on physical and human capital accumulation)? *Question continues on next page*



- (c) [10] Kuznet's inverted 'U' hypothesis says that as incomes rise in a country, inequality will first rise and then fall. Suppose growth is caused by the arrival of new technologies that initially changes the return to skills. Discuss how this could cause inequality to rise and then fall.

4. Short answer questions

- (a) [10] Discuss how misallocation of factors among firms affects efficiency in an economy.

- (b) [5] For culture to be an important determinant of income differences, economists have to show that cultural differences significantly affect factors important for growth. What are reasons that make this a difficult task?

- (c) [7] One of the things the Clark and Wolcott paper "One Polity, Many Countries: Economic Growth in India 1973-2000" looks at is worker productivity differences across countries in the textile industry in the 1900's? Critically discuss the reason they give for why worker productivity was so much lower in India than in the U.S. *Space for answer continues on next page*

- (d) [6] Acemoglu, Johnson and Robinson in their article “Understanding Prosperity and Poverty: Geography, Institutions and the Reversal of Fortune” argue for the importance of Institutions in determining income differences. What is the “reversal” they are looking at? How do they use the timing of income divergence to argue that the case of institutions. Explain your reasoning.

Rough work - will not be graded

Rough work - will not be graded

End of examination  
Total pages: 14  
Total marks: 100