

Instructions

1. This part of the exam is take-home, open-book, and open-notes. You may use any class materials at your disposal in preparing your answers.
 2. You may not communicate in any way with anyone other than the instructor about the exam or the questions. It is to be done strictly on an individual basis.
 3. The exam is due at the beginning of class on Wednesday, March 11th. I don't recommend attempting to type your answers unless you really like formatting equations and graphs on your word processor.
 4. These problems do not require difficult or tricky algebra. The solutions are not long or messy. My solution to each problem fits on one page or a little more, including all intermediate steps and relevant graphs. You will probably be able to work out the basic solutions to each problem in an hour or less if you understand what you did on the homework projects. If you get totally stuck, come and talk to me; I may be able to nudge you in the right direction, though I will not be as helpful as on the homework.
 5. You are responsible for making sure that you understand each question clearly. In case of any ambiguity, be sure to consult the instructor.
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1. Romer's problem 2.11.
2. Romer's problem 3.13.
 - Add part (d): Suppose that an increase in Abramovitzian "social capability" improves the efficiency with which the South learns from Northern technology. Which parameter(s) of the model will be affected and how? How will the long-run steady-state growth paths of the North and South be affected? Be sure to clarify whether any effects are level effects or growth effects.
3. Romer's problem 3.16.
 - Add part (c): What effect, if any, will an increase in the proportion of teachers vs. production workers have on the growth rates of human capital, physical capital, and output?