

Instructions

1. This exam is take-home, open-book, and open-notes. You may use any class materials at your disposal in preparing your answers. However, do not disadvantage your peers by repeatedly checking out reserve materials or keeping them past-due.
 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 noon on Friday, October 30th. It may be submitted either in paper form or electronically.
 4. Each of these questions requires a thoughtful and well-organized answer, but your answers need not be extremely long. The basic logic of your answer should be transparent and well-supported. *Try to connect your answers back to the course readings and discussions using quotations where they are useful.* (You may, but are not encouraged to, do additional reading.)
 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. The two principal characteristics of public goods are nonrivalry and nonexcludability. Define these terms. In what ways is useful technological knowledge nonrival? What are the limits to its nonrivalry? In what ways is it nonexcludable? What are the limits to nonexcludability?
2. There are many potential beneficiaries from innovation in a production process: the producers, the consumers/users, and the input suppliers are among the obvious ones, but there may be indirect effects on others as well. For each important group, explain how it may gain from a process innovation that lowers production costs. What factors determine which group gains the most? What factors determine which group is most likely to undertake the innovation through purposeful R&D activity?
4. Mokyr, in his Chapter 7, lists numerous societal characteristics that can encourage or impeded innovation. Choose several of these that you think have had the greatest positive influence on innovation in 20th century America (in comparison to other countries or times) and explain why you think that they have been so important.