Note: given the fact that you’re ‘obliged’ to answer the weekly questions, try to profit the most from the task:

- Start by reading the slides (**twice**).

- Then, **leave the notes aside** and answer the questions **(I do not value answers that are transcriptions of the lecture notes).** If you do this, you’ll have to study much less before for the tests.

Reserve 4 hours per week to answer the questions. Hand the **answers of L15** at the lecture of **April 20th** (separate from those of Week 7)

**Warning:** in June you’ll have **exams of about 5 different courses** **in just two weeks.** Therefore, if you do not study properly while answering the weekly questions, your chances of passing this course will be much lower.

Please write **WEEK 8 in bold** at the beginning of your answers.

 **Week 8**

**L15: R&D: patents and copyrights**

**1.**80% of the rise in productivity over the past 2 centuries has resulted from what?What about the remaining 20%?

**2.** Has TP contributed to about 80% of the rise in living standards over the past 200 years? Explain.

**3.** R&D is widely spread across the economy. Do you agree?

4. Which instruments do govs use to stimulate the creation of innovations by private companies?

5. a) What is the similarity between a patent and a copyright?

b) What are the two differences between a patent and a copyright?

6. What has the WTO done to prevent the violation of patents of one country by companies of other countries?

7. a) Which price for a new drug would prevail without a patent? Explain.

b) Would have consequences for the economy? Explain.

8. a) Which is the price of the new drugs in the first 15 years after they are introduced in the market? Explain.

b) What are the benefits of that for the economy? Explain.

c) What is the cost of that for the economy? Explain.

d) Why don´t patents last 100 years instead of just 20 years?

9. a) Why did company that invented HAART sell it for $10,000-$15,000?

b) What was the bad consequence of that?

c) Why were millions of people already taking HAART in 2010?

Consider the case of a patent that causes unacceptable costs.

10. Compare the costs and benefits of violating and not violating the patent?

11. Explain the two solutions to this dilemma.

**L16: Public funding of R&D**

Consider the invention of a new product and **illustrate your answers with a graph.**

12. a) What is the benefit captured by the inventor during the patent?

b) What is the benefit captured by the inventor after the patent?

13. a) Why do consumers get a benefit that is not captured by the inventor even during the patent?

b) Why do consumers get a benefit that is not captured by the inventor even after the patent?

14. Why do other inventors increase their **knowledge** when a patent is registered?

15. a) Give the two reasons why other inventors may get **excess profits** as a result of the patent of an initial inventor?

b) Who else will benefit? Explain.

16. Summarize the reasons for the difference between total benefits an invention generates for society and the excess profits obtained by the inventor.

17. Consider the graph on slide 9 of L16:

a) What would be the number of innovations generated without patents? Explain.

b) What would be the number of innovations generated with patents? Explain.

c) What would be the number of innovations generated that would maximize social benefits? Explain.

b) How much does the society lose for producing N instead of N\* innovations? Explain.

18. Consider again the graph on slide 9 of L16:

“The gov should subsidise R&D carried out by private firms, so as to raise the private excess profits generated by **all** the inventions up to their social benefits”.

a) Would this raise the number of inventions to the one that maximizes social welfare? Explain.

b) Should that be done in the case of the research projects to the left of N? Explain.

c) Should that be done in the case of the research projects to the right of N\*? Explain.

b) Should that be done in the case of the research projects between N and N\*? Explain.

19. Still under the graph on slide 9 of L16: which research projects should be subsidized and by how much each? Explain.

20. What’s the difficulty govs face when they have to decide on the amount of funding to be provided to the R&D of private companies?

21. What’s the problem with an invention that leads to a social benefit greater than its R&D cost but to excess profits lower than that cost? Explain.

22. Consider the acronym R&D.

a) Which activities are implied in “R”?

b) Which activities are implied in “D”?