ECON 107
Quiz 7

This quiz will last 10 minutes.

1. *(6 points)* **Honor Statement:** Please read and sign the following statement:

   I promise that my answers to this test are based on my own work without reference to any notes, books, or the assistance of any other person. I will also neither help others nor use a calculator or other electronic aid for calculation.

   Name and Surname: _
   Student ID: _
   Signature:

   _

2. *(5 points)* What is a *non-rival* good? Explain and give several examples, in specific why is it generally best for governments to provide non-rival goods?

   Solution 1 *A good is non-rival if multiple consumers can all consume the same unit.*

   The classic example is sunlight, when its a beautiful day in Spring (as long as its not freezing) all the students head over to the Green Area until the temperature drops so low they will freeze to death. It is, of course, no cost if more students want to come.

   Another great example is a new movie, like Zootopia 2. Over 500 million dollars in revenue last weekend! Obviously it would have little cost if ***everyone*** *went to see it instead of just about 2% of the world population.*

   Other examples are National Defense, lighthouses, inventions, and etcetera.

   While many public goods are reclassified as club goods so that private firms have an incentive to provide them, for efficient provision the only hope is government. For example, in order to provide national defense you should really add up the amount each citizen thinks it is worth providing. None of us could afford even one tank, of which Turkey has many.

3. *(6 points)* In the long run we expect $P = AC$ (price equals average total cost). Explain.

   Solution 2 *First of all notice that* $\Pi = Pq - c(q) = \left(P - \frac{c(q)}{q}\right) q = (P - AC)\, q$

   Now we know that if $\Pi > 0$ *there will be entry, and thus in the long run we must have* $\Pi \leq 0$.

We also know if $\Pi < 0$ *there will be exit, and thus in the long run we must have* $\Pi \geq 0$.

The only way we can satisfy both conditions is if profit is zero, or in other words:

$$\begin{aligned} 0 &= \Pi = (P - AC)\, q \\ 0 &= P - AC \\ AC &= P \end{aligned}$$

4. *(3 points)* Standard feedback questions:

   (a) Out of ten, my level of comprehension of the material covered this week is:

   (b) My favorite topic of the week was:

   (c) The topic I understood the least this week was: