CSUN Econ 433 Week 4 Problem Set

Name:

A commodity is traded in a perfectly competitive market. The consumers’ marginal private benefit for the commodity is:

where is the quantity consumed. The producers’ marginal private cost of producing the commodity is constant at 10. For each unit produced, a marginal external cost of 5 is imposed on members of society other than the producers and consumers.

1. In the absence of regulations, what quantity of the commodity will be produced? (5 pts)
2. What is the socially efficient level of production? (5 pts)
3. Calculate the total amount of external damages caused by the production in problem 1.   
   (5 pts)
4. Design a policy that would cause the private producers to internalize the externality and produce at the efficient level. (5 pts)

The following questions pertain to Lab 4.

You have two datasets, df1 and df2. df1 contains the variables SERIAL, PERNUM, YEAR, and EMPSTAT. df2 contains the variables SERIAL, PERNUM, YEAR, and RACHSING.

1. Write down a command that merges df1 and df2 on the variables SERIAL, PERNUM, and YEAR. (5 pts)
2. How many variables does the resulting dataframe from problem 5 contain? (1 pt)