

Final Exam
(100 points)

- (5 pts) 1. Define endogenous income.
- (10 pts) 2. Describe a proposed policy or project situation where the policy or project is desirable to a specific group of agents. Provide a single, clear example of a secondary economic effect expected to happen as a consequence of this proposal. Explain why or why not this particular secondary economic effect is countable as a welfare effect.
- (10 pts) 3. According to one of the class readings, "Consumer surplus measures utility change only when the marginal utility of income is constant." Interpret and discuss this claim.
- (20 pts) 4. Define and contrast the 2 common concepts of economic efficiency for a society. Be sure to address the ways in which they overlap as well as where they are different. [Please use complete sentences in your response.]
- (20 pts) 5. There are multiple forms of externality policy that may be practical, depending on circumstances. Given the distinction between depletable and undepletable externalities (explain this distinction), discuss the implications for policies. Are there policy types which are potential remedies for one of these externality types but not the other? Why or why not?
- (35 pts) 6. A public good (x) with total production costs of $C = 600 + \frac{1}{2}x^2$ is currently supplied by government in the amount $x=220$. Consumers of x can currently use the good for free. Production of x is financed by a per unit tax on the sales of private good y. You may assume the tax is currently \$1 per unit of y. The industry supply (pretax) of y is given by $y_s = -\frac{799}{2} + \frac{1}{2}p_y$ and the aggregate demand (pretax) for y is $y_d = 50000 - \frac{1}{2}p_y$.

There are two types of public good consumers, a and b, and there are 12100 consumers of each type. Their individual demands, for each consumer, are $x_a = \frac{1}{p}$ and $x_b = \frac{3}{p}$.

- a. Calculate the tax revenue and the y-market price and quantity results under initial policy.

For b and c below: A new technique called Dude has been invented for achieving exclusion of x users. If Dude is implemented, the y tax can be eliminated, and pricing of the x good can be used as the financing instrument.

- b. Calculate the optimal x and y price and quantity results assuming that Dude is implemented.
- c. In light of its aggregate welfare effects, what is Dude worth to society?