

**In-Term Exam #3**  
(70 Points Possible)

*Please allocate your time wisely. Show all your work to earn full credit.*

(10 points)

1. When we discussed the Coastal Zone Regulations in Delaware case in class, we saw that chemical companies in this case expressed concern about the adverse impact increased environmental demands would have on their competitive position in global markets. Their concern was that more regulations would increase their cost of doing business. Using the competitive model of the firm, graphically illustrate the economic fear of a chemical company in this situation, assuming the company has no influence on product price. Briefly discuss the model.

(10 Points)

2. Suppose the Forest Service has a policy that all campground improvements have to generate a positive net present value over a six-year planning horizon. The planned renovation of Spillway Campground in the Sitgreaves National Forest has the following series of net cash flows:

<u>Year</u>	<u>NCF</u>
1	\$-40,000
2	-20,000
3	25,000
4	30,000
5	30,000
6	30,000

If the Forest Service's discount rate is 6%, does the renovation of the campground meet the agency's policy?

(15 Points)

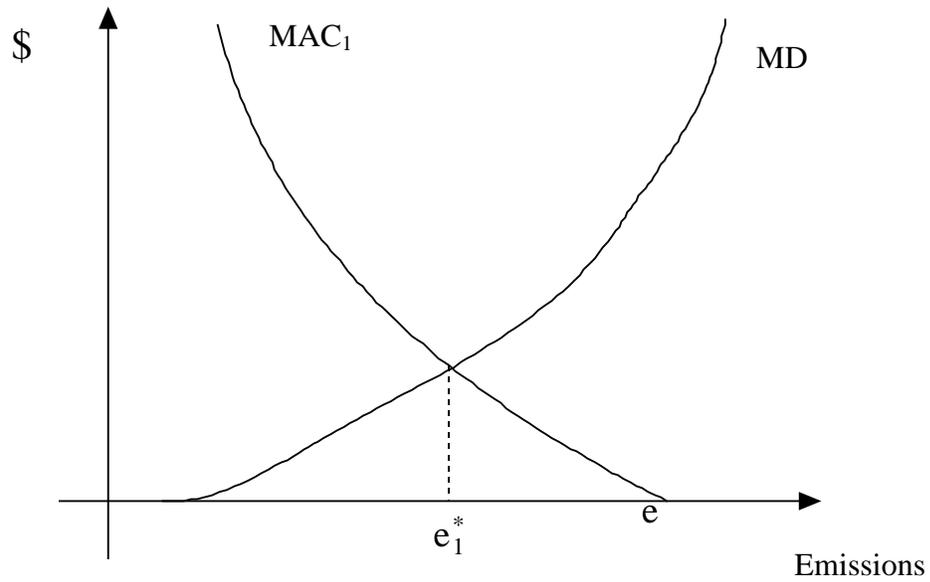
3. In the simulation, Carson Extension, the participants in the simulation pointed out numerous differences between the parties that could be traded across.

a. Briefly discuss two differences that could produce trades in this negotiation.

b. Graphically illustrate your estimate of the BATNAs of Stuart Carson and the Army Corps of Engineers.

(15 Points)

4. Gary Thacker has developed a new type of tillage equipment for farmers that produces less dust when fields are plowed. The technology holds significant promise for reducing dust emissions from agricultural lands. At the present, agricultural operations are taking no action to reduce emissions so emissions are at  $e$ . The Department of Environmental Quality wants farmers to adopt a higher cost abatement technology represented by  $MAC_1$ . This inferior technology, as compared to Mr. Thacker's, produces a socially optimal level of dust pollution at  $e_1^*$ . Using this graph, illustrate how Mr. Thacker's equipment could lower the level of optimal emissions and reduce total abatement costs. Compare total abatement costs for both technologies.



(10 Points)

5. Briefly discuss four guidelines that can be followed by the public sector in its regulatory process to promote innovation – friendly regulations for the private sector. Discuss your four guidelines in the context of a specific industry.

(10 Points)

6. Illustrate the following statement with an economic model:

“Coal-generated electric power produces an external cost for people living near the power plant. Therefore, less power should be generated by the plant and the price of electricity should be higher.”