

Quiz #7
(50 Points)

- (10) 1. Benefit valuation techniques such as CVM, travel cost, and hedonic pricing all attempt to measure an important economic value for public policy analysis. What is that value, what does it mean, and how would you illustrate it with a graph?
- (5) 2. In the case study “Bluebird Smelter” \$5 million was included in the costs of the smelter due to the premature deaths of five people. How would you go about estimating the implied value of human life using a willingness to pay approach?

(10) 3. Patricia Orr spoke to the class about the use of CV (or CVM) techniques to gain insights on society's value to preserve a stretch of the San Pedro River in Arizona. Please answer the following questions associated with Orr's presentation.

a. What is the problem along the San Pedro River?

b. List two of the NOAA recommendations that Orr followed in her research.

c. What was the hypothetical market she constructed to elicit CV estimates?

d. Who were the visitors to the area?

e. What were the individual and aggregate estimates of WTP?

- (15) 4. Suppose you are faced with the following streams of net benefits for a small watershed improvement project. The initial investment today is \$15,000.
- a. If your agency's discount rate is 6%, should your agency invest in this project? (Use the NPV criterion and show all your work to receive full credit)

<u>Year</u>	<u>Net Benefit</u>
1	\$ -20,000
2	-5,000
3	14,000
4	21,000
5	25,000

- b. If your agency's discount rate was 15%, how would your answer in (a) change? Why? (Do not recalculate your answer)

- c. What is the ethical content of a discount rate?

(10) 5. The CVM is widely used in natural resource policy making. Please evaluate the use of this tool by discussing its advantages and disadvantages.