**Environmental economics**

(1007, 1064 and 1084)

1. Why do people behave in ways that cause environmental destruction? Explain and bring at least two examples.
2. Malthusian theorem. Explain and show graphically.
3. What is the accumulative and non-accumulative pollutant? Explain, show graphically and bring examples.
4. Production Possibility Frontier (PPF) and Community Indifference Curve (CIC). Show graphically and explain (assume that axis is“goods” and axis is a “environmental quality”).
5. The Environment and Growth: Sustainability over Time
6. **Problem solving:** Optimal solution of “goods” and “environmental quality”
7. Willingness to Pay (WTP) and demand curve. What is the different between them? Explain each one and show graphically (linear and non-linear WTP).
8. **Problem solving:** Calculate the and (if demand function is given).
9. **Problem solving:** Aggregate demand function.
10. **Problem solving:** Calculate the net social valueusing the and functions.
11. Negative externality of Production (an external cost). Show graphically and explain.
12. Negative externality of Consumption (an external cost). Show graphically and explain.
13. Positive externality of Production (an external benefit). Show graphically and explain.
14. Positive externality of Consumption (an external benefit). Show graphically and explain.
15. Linear and non-linear marginal abetement cost functions. Show graphically and explain.
16. **Problem solving:** Calculate the net social cost using the and functions.
17. **Problem solving:** Calculate the net social gain using the and functions.
18. **Problem solving:** The aggregate (total) abatement cost function
19. **Problem solving:** Calculate the total damage (at the intersection point) using the and functions.
20. **Problem solving:** Calculate the Total Abatement Cost (at the intersection point) using the and functions..
21. Why society wants to maximize net social value when choosing a target level of pollution?
22. Are low interest rates () “good” or “bad” for the environment? Defend your argument.
23. **Problem solving:** present and future value of environmental cost
24. **Problem solving:** present and future value of environmental benefit
25. **Problem solving:** A two-player pollution abatement game.
26. **Problem solving:** Assume that,and are given. In which period the quantity of supply will be zero? Draw the quantity and the marginal cost graphs (MC is constant).
27. **Problem solving:** Assume that,and are given. Also assume that the ***marginal cost of renewable resource*** is given. Find the chock prices and draw the quantity and the marginal cost graphs (MC is constant).
28. **Problem solving:** Assume that,and are given. In which period the quantity of supply will be zero? Draw the quantity and the marginal cost graphs (MC is not constant).
29. **Problem solving:** Assume that,and are given. Also assume that the ***marginal cost of renewable resource*** is given. Find the chock prices and draw the quantity and the marginal cost graphs (MC is not constant).
30. **Problem solving:** Assume that, are given (marginal cost is constant). Find the ***optimal allocation*** of the quantity.
31. **Problem solving:** Assume that, are given (marginal cost is constant). We need to allocate supply of a depletable resource between two periods. If consumption of the first period is given, find the ***future value of net benefit*** at period one and two also draw graphs.
32. **Problem solving:** Assume that, are given (marginal cost is constant). We need to allocate supply of a depletable resource between two periods. If consumption of the first period is given, find the ***present value of net benefit*** at period one and two also draw graphs.
33. Weak, strong and environmental sustainability. Explain each one.
34. Environmental impacts of World Natural Gas Production (describe the general situation).
35. Environmental impacts of World Natural Gas Consumption (describe the general situation).
36. Environmental impacts of World Natural Gas Trade and Prices (describe the general situation).
37. Environmental impacts of Natural Gas Production in Azerbaijan (describe the general situation).
38. Environmental impacts of World Crude Oil Production (describe the general situation).
39. Environmental impacts of World Crude Oil Consumption (describe the general situation).
40. Environmental impacts of World Crude Oil Trade and Prices (describe the general situation).
41. Environmental impacts of Crude Oil Production in Azerbaijan (describe the general situation).
42. **Problem solving:** Calculate the *total and net gain for fishery* using the and functions *(*assume that *fishery has property right* to use the river).
43. **Problem solving:** Calculate the *max value of* *net gain for chemical company* using the and functions (assume that *fishery has property right* to use the river).
44. **Problem solving:** Calculate the *max value of* *net gain for fishery* using the and functions (assume that *chemical company has property right* to use the river).
45. **Problem solving:** Calculate the *total damage for fishery* and *total gain for chemical company* (at the social efficient point) using the and functions (assume that *fishery has property right* to use the river).
46. **Problem solving:** Calculate the Total Abatement Cost *for chemical company* and *total gain for fishery* (at social efficient point) using the and functions (assume that *fishery has property right* to use the river).
47. **Problem solving:** Calculate the *total damage* and *total gain* *for fishery* using the and functions (assume that *chemical company has property right* to use the river).
48. **Problem solving:** Calculate the *total gain for chemical company* and *total cost for fishery* using the and functions (assume that *chemical company has property right* to use the river).
49. **Problem solving:** Calculate the *TAC for chemical company* and *net gain for fishery* (at the social efficient point) using the and functions (assume that *chemical company has property right* to use the river).
50. **Problem solving:** Calculate the *total damage for fishery* and *net gain for chemical company* (at the social efficient point) using the and functions (assume that *chemical company has property right* to use the river).
51. Type of standards. Explain and give an example
52. What kind of standard(s) would you recommend for Azerbaijan? Why? Explain.
53. **Problem solving:** Calculate the maximum value of net social gain using the and functions.
54. **Problem solving:** Calculate the net social gain using the and functions (if standard is given).
55. **Problem solving:** Uniform Standard.
56. **Problem solving:** Cost-Effective Individual Standard
57. Compare the tax approach with an emission standard.
58. Why wouldn’t the polluter (firm) simply disregard the tax, continue to pollute the way it has been, and just pass the tax on to consumers in the form of higher prices?
59. **Problem solving:** Calculate Net Social Benefit and Total Abatement Cost using the and functions (if tax rate is given).
60. **Problem solving:** Calculate the total tax bill using the and functions (if tax rate is given).
61. **Problem solving:** Calculate the total private cost using the and functions (if tax rate is given)
62. **Problem solving:** Calculate the total tax bill using the and functions (if tax rate and tax-free are given).
63. **Problem solving:** Calculate the total private cost using the and functions (if tax rate and tax-free are given).
64. **Problem solving:** Calculate the net social benefit using the and functions (if tax rate and tax-free are given).
65. **Problem solving:** Calculate the Total Abatement Cost using the and functions (if tax rate and tax-free are given).
66. **Problem solving:** Calculate and compare the sum of Total Abatement Costs using the and functions (if standard and tax are given).
67. Maximum sustainable yield of a fishery. Derive mathematically and explain economic meaning. Also, find the profit at this point
68. Efficient sustainable yield of a fishery. Derive mathematically and explain economic meaning. Also, find the profit at this point
69. Open access equilibrium level of a fishery. Derive mathematically and explain economic meaning. Also, find the profit at this point.
70. **Problem solving:** The maximum sustainable yield and profit at this point
71. **Problem solving:** The efficient sustainable yield and profit at this point
72. **Problem solving:** The open access equilibrium level and profit at this point
73. What is the different between an open-access fishery and a common property fishery?
74. Stable and unstable points of fishery. Draw graph and explain the meaning of each point.
75. **Problem solving:** Stable and unstable points of fishery