

Date: Tuesday February 25th, 2014

Name:

Student #:

Multiple Choice (8)

Please circle the correct answer. Each question is worth one mark.

1. Governments in North America announce that wood is a preferred building material because it is considered a renewable resource and will promote its use in all building applications. This is likely to lead to the following in regard to the market for softwood lumber:
 - a. An increase in the equilibrium price, decrease in the equilibrium quantity
 - b. An increase in the equilibrium price, increase in the equilibrium quantity
 - c. A decrease in the equilibrium price, decrease in the equilibrium quantity
 - d. A decrease in the equilibrium price, increase in the equilibrium quantity

2. If a firm faces an elastic demand curve and lowers its price, total revenues will:
 - a. Increase
 - b. Decrease
 - c. Remain the same
 - d. Not enough information

3. Which of the following factors does not affect the extensive margin:
 - a. An increase in log prices
 - b. A decrease in fuel costs
 - c. An increase in total inventory
 - d. The introduction of cost-cutting logging technologies

4. A profit maximizing sawmill will set its output level at:
 - a. The level of output that maximizes net present value
 - b. The level of output where fixed costs do not change
 - c. The level of output where the marginal revenue of the last unit of output is equal to the marginal cost of the last unit of output
 - d. The level of output that minimizes the extensive margin
 - e. All of the above

5. Where you have two payments of equal value that occur in the future, A and B and where $A=B$, but occur at different times: A happens at 40 years; and B at 60 years. Which of the following statements is true when there is a positive discount rate:
 - a. In terms of Present Value A will always be bigger than B
 - b. In terms of Future Value B will always be bigger than A
 - c. In terms of Present Value B might be bigger than A depending on the interest rate
 - d. In terms of Future Value A will always be bigger than B
 - e. In terms of Future Value B might be bigger than A depending on the interest rate

6. Which of the following factors would not influence a bid for a timber sale:
 - a. Utilization standards
 - b. Log export restrictions
 - c. Number of bidders
 - d. Discount rate

7. The following always occurs under a monopoly (relative to market equilibrium):
 - a. Price decreases
 - b. Quantity supplied increases
 - c. Consumer surplus decreases
 - d. Producer surplus decreases

8. Which one of the following is considered a public good:
 - a. Timber
 - b. Non-timber forest products
 - c. Recreation
 - d. Biodiversity

True or False (4)

Please circle the correct answer. Each question is worth one mark.

9. Perfect competition means that there are no profits in the economy.

True or False

10. Tragedy of the commons describes the dilemma that arises when individuals, by acting independently and rationally according to each one's self-interest, act contrary to a group's long term best interest by depleting the common resource.

True or False

11. The marginal social cost is always higher than the marginal benefit when there is an externality.

True or False

12. A monopsony, despite leading to a different outcome than market equilibrium, does not result in any deadweight loss.

True or False

Short Answer Questions (12)

Answer only 3 of the following 5 questions. Each question is worth 4 marks.

13. Property rights have several dimensions of economic importance. Name one type and describe its importance.

14. Explain whether or not a firm will shut down when it is losing money.

15. You have two different timber investments you are evaluating. Both of them will yield \$10,000 ten years from now (you use a 5% discount rate to evaluate them). Investment A requires you to put \$2500 down now and \$2500 down in four years, while investment B requires you to put down \$5000 in year 4. Which do you prefer and why?

16. You work as a forest economist for the Provincial government. A firm has approached the Provincial government to increase the allocation of timber they can harvest, stating that by doing so that they can take advantage of economies of scale with the existing equipment and manufacturing capacity they have. There is surplus timber that is available of equal quality to what they are currently harvesting. They propose to buy this additional volume at the market rate (i.e. current stumpage rates), which they state reflects the true economic value of the wood to them. Is this true and why or why not?
17. Explain briefly either how or why economists would want to value forest resources even if there is no market for them.

4. Problem solving (20)

Each problem is worth 10 marks

18. You are in charge of scheduling logging operations for the week. This is the information you are given. You are also told that you are limited by your equipment to harvesting 7500 cubic metres.

Timber Stand	Quantity (m ³)	Marginal Cost of Logging (/m ³)	Average Value (selling price) (/m ³)
Site A	5000	30	40
Site B	3000	45	60
Site C	1000	50	80
Site D	5000	40	45
Site E	1000	50	70

- a. If you could harvest all or part of each stand, which stands should you harvest to maximize profits? Please indicate the volume of harvest from each stand and total profits.
- b. If you are told that you are no longer allowed to harvest partial stands, but have to take the whole stand, does this change your answer? If so please indicate which stands you would harvest and your new profit.

19. The government is establishing the AAC for a new timber supply area and has calculated that 300,000 cubic metres can be harvested annually at a low cost of just \$20 per cubic metre which includes the costs of bringing it to market. There is another 100,000 cubic metres of additional volume that could be harvested at a cost of \$40 per cubic metre (again includes the cost of bringing it to market) but that 400,000 cubic metres would be the maximum volume that could be sustained.

a. Draw and label the supply curve.

b. How much rent would be available if the competitive log price is \$50/m³?

Bonus Question (1)

Which of the following famous economist is still alive:

- a. Alfred Marshall
- b. Adam Smith
- c. John Maynard Keynes
- d. David Ricardo
- e. Ronald Coase