FINAL – VERSION #1

A total of 150 points are possible.

Last Name: _____ First Name: _____

Your Student ID Number: __ __ __ - __ __ - __ __ __ __

Please check your TA and the section number you were <u>assigned</u> to:

!	#01 Nichole Renda	MW 4PM		!	#07 Seungjoon Lee	TR 5PM
!	#02 Nichole Renda	MW 5PM		!	#08 Jennifer Wood	TR 6PM
!	#03 Brian Rosario	MW 5PM		!	#09 Helen Han	TR 8AM
!	#04 Brian Rosario	MW 4PM		!	#10 Seungjoon Lee	TR 4PM
!	#05 Jared Rodecker	TR 4PM		!	#11 Jennifer Wood	TR 5PM
!	#06 Jared Rodecker	TR 5PM				

Part A: Multiple Choice Questions
(25 questions, each of which is worth 4 points, for 100 points in total)

Instructions: Write on the Scantron your name (last name first), student ID number, date, exam version number, and your section number in the "name," "subject," "date," "test no." and "hour" boxes respectively. For example,

NAME	McComb, Madeline		
SUBJECT	530-66-6271	TEST NO.	Vers. 1
DATE	4/30/99	HOUR	Sect 4

** Warning **
If you first fill in an answer and then erase it to fill in a different one, and the first answer is not fully erased, the Scantron reader may detect two answers and not accept either one. Do not fill in an answer till you are sure this is the one you want to give, or you may not receive credit for the question.

1. Which of the following is an example of a PUBLIC GOOD
A.   Cable TV
B.   Telephone service
C.   Electrical power supply
D.   Education
E.   National defense

2. Which of the following activities generates a POSITIVE EXTERNALITY
A.   Driving in the rush hour
B.   A government subsidy to savings
C.   Minimum wage laws
D.   Investment in expanding the stock of knowledge.
E.   Rent controls

3. The value now of $121 received two years in the future is $100. The interest rate is
A.   2.1%
B.   5%
C.   10%
D.   11%
E.   21%

4. You have paid a construction company $200,000 for a new home in Davis with a move-in date of Jan 1, 2000. Because a rare frog is discovered nesting on your lot, the move-in date is delayed to Jan 1, 2001. Your lawyer sues for damages. If the real interest rate is 5% how much should the court award you?
A.   Nothing
B. $10,000
C. $200,000/(1+.05)
D. $200,000/.05
E. $200,000

5. Your marginal revenue is 6 irrespective of the amount of output you produce. Your marginal cost is 1+Q. Which of the following statements is FALSE.
A.   Your profit maximizing output is $Q = 5$.
B.   You are a monopolist.
C.   You produce an efficient level of output.
D.   You may make negative profits.
E.   You have an increasing marginal cost.

6. Which of the following statements is *normative*?
A.   Competitive firms do not engage in price discrimination.
B.   Monopoly firms often engage in price discrimination.
C.   Price discrimination can result in different racial groups being charged different prices
        for the same good.
D.   Price discrimination is sometimes illegal.
E.   Price discrimination should be illegal.

7.   For the demand curve below which point has the highest **PRICE ELASTICITY OF DEMAND.**
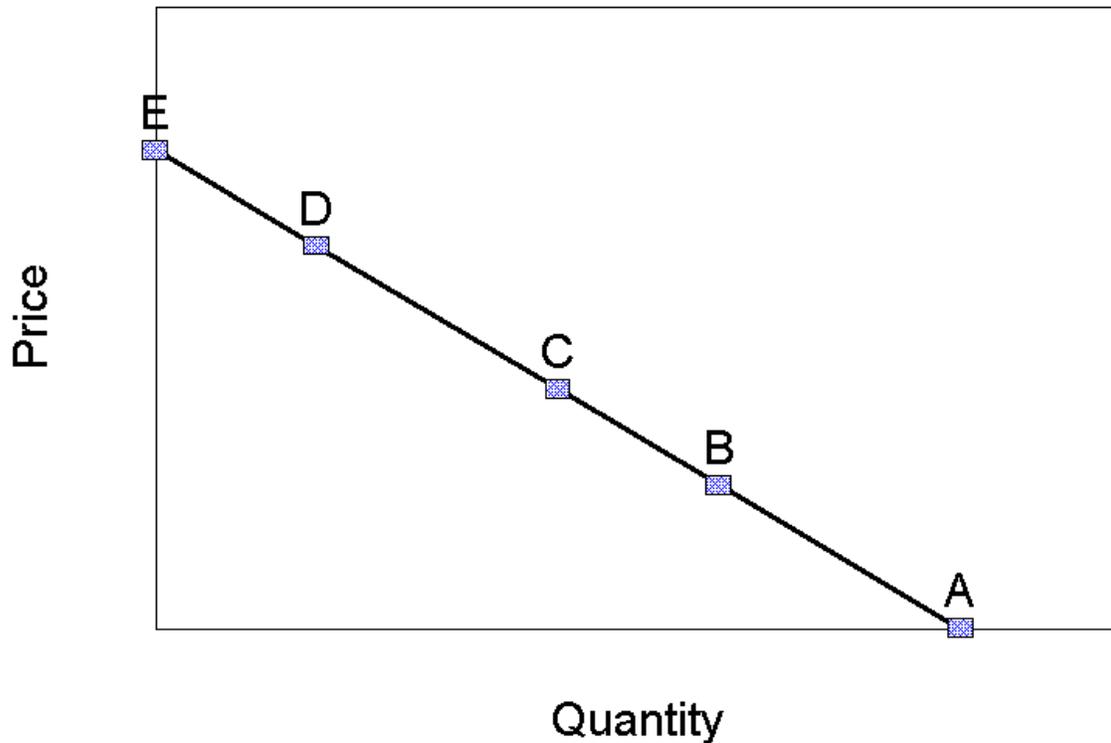
8. The supply curve for coffee is given by $Q = 100$. The demand curve is $P = 12 – Q/10$. When a tax of $1 per unit is imposed on producers:

A.   The market price rises by $1.
B.   The market price rises by less than $1.
C.   The market price is unchanged.
D.   The market price falls by less than $1.
E.   The market price falls by $1.

9. Firms whose technology shows increasing returns to scale have decreasing long run marginal costs, but increasing short run marginal costs. This is because

A.   Economic theory often does not explain the real world well.
B.   There are some sunk costs in the short run.
C.   Some inputs cannot be increased in the short run.
D.   Variable costs are fixed costs in the short run.
E.   Its hard to find workers on short notice.

10. The diagram above below the budget constraint for a consumer and an indifference curve. Which of the points shown MIGHT be a consumption choice a rational consumer would make?

Quantity of food
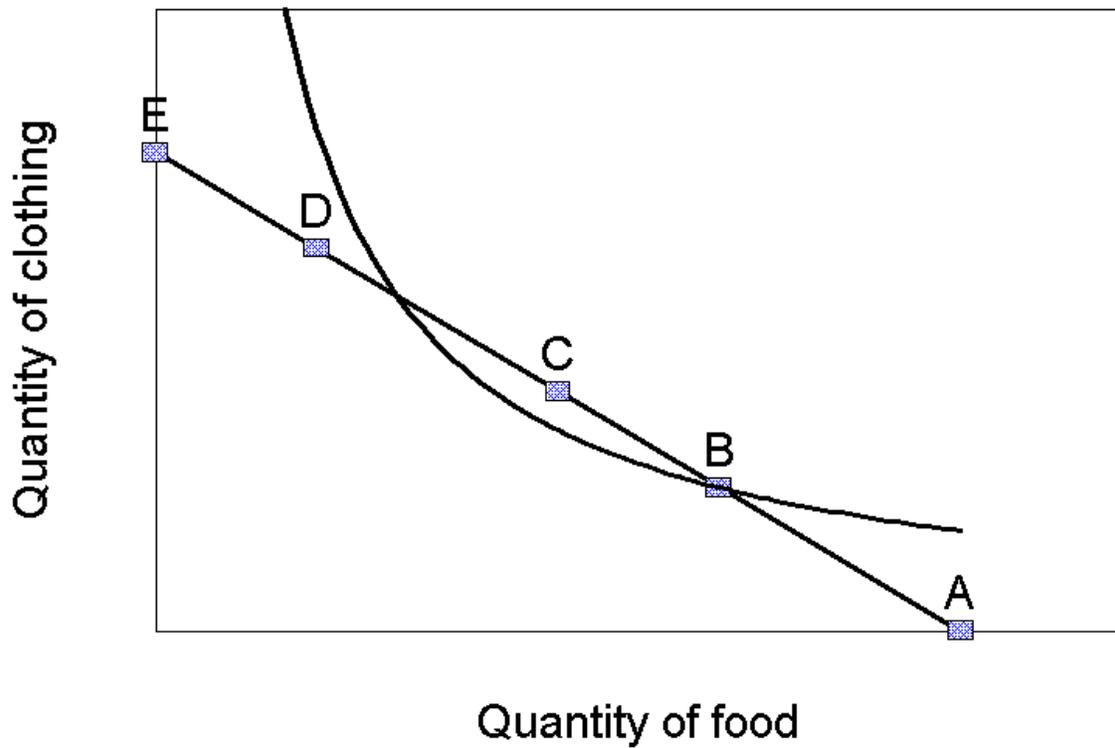
11. Suppose that in a competitive market the demand for taxi rides can be written as $Q_d = 24 - P$ and the supply can be written as $Q_s = P - 4$. What is the market equilibrium price?

A. $24
B. $14
C. $12
D. $10
E. $8

12 In 11 the PRODUCER SURPLUS at the market equilibrium is

A. $100
B. $64
C. $50
D. $32
E. $18

13. Suppose in 11 the taxi commission fixes a fare of $18. There is free entry of taxis to the market. What is the loss of TOTAL SURPLUS from all sources from fixing the prices.

A. $0
B. $16
C. $48
D. $64
E. $100

14. In a constant cost competitive industry in the long run the average cost of firms is LAC = $(64/q) + 1 + q$. The long run marginal cost is LMC = $1 + 2q$. What is the price in the long run?

A. $1
B. $5
C. $11
D. $13
E. $17

15. In the previous question if n is the number of firms in this constant cost industry what is the slope of the LONG RUN SUPPLY CURVE
A.   0
B.   2
C.   2/n,
D.   2n
E.   1+2/n

16. Suppose the price elasticity of demand for gasoline is 2. The supply elasticity is 0. Consumption of gasoline is associated with an external cost of $1 per gallon. In order to get an EFFICIENT outcome in the gasoline market, the government NEEDS TO

A.   Impose a tax of $1 per gallon on producers of gasoline
B.   Impose a tax of $1 per gallon on consumers of gasoline.
C.   Impose a tax of $2 per gallon on producers of gasoline
D.   Impose a tax of $2 per gallon on consumers of gasoline.
E.   Do nothing.

17. The reason many economists argue that the efficient outcome should always be chosen by the government is that
A.   While people have different tastes everyone values efficiency.
B.   We live in a democracy and can vote on taxes and transfers.
C.   Efficiency measures count the desires of the rich much more than those of the poor, and it is the rich who have made America what it is.
D.   We cannot measure happiness, but we can count $, and efficiency counts $.
E.   In the 1960s when people did not value efficiency economic growth was really slow.

18. Competitive industries can only exist if individual firms eventually experience rising average costs. The most likely source of such rising costs is:

A.   Increasing input costs as size increases.
B.   The existence of large set-up costs.
C.   The tax system.
D.   The difficulty of motivating and supervising non-family workers.
E.   Consumers' preferences for dealing with smaller firms.

19 Suppose a monopolist has a demand curve given by $Q = 24 - 3P$. At what quantity does marginal revenue become 0?

A.   0
B.   8
C.   12
D.   16
E.   24

20. Suppose that a monopolist who employs capital is making positive economic profits. The interest rate in an economy increases. What happens to the monopolists economic profits?

A.   Stay the same
B.   Increase
C.   Decrease
D.   Not sufficient information to tell

21. Which of the following forms of price discrimination is not based on a **HURDLE**?

A.   Discounts to the elderly
B.   Grocery coupons
C.   Saturday night stays for airline tickets
D.   Advance purchase requirements for airline tickets
E.   Mail-in rebates

22. Suppose a producer of a good faces a demand curve. Which of the following is always TRUE?

A.   MR is greater than 0.
B.   The producer never sells ANY output for marginal cost.
C.   The product of the producer is in some way distinct from that of all other producers.
D.   The producer is a monopolist.
E.   The producer has positive profits.

23. High income people tend to have fewer children. This means that in economic terms children are:

A.   Annoying
B.   Inferior goods
C.   Normal goods
D.   Luxury goods
E.   Substitutes for income

24. Which of the following taxes would NOT cause any **deadweight loss**?
A.   A tax of $0.20 per soft drink sold.
B.   A tax of $2 per restaurant meal.
C.   A tax of $1,000 per person employed as a college professor on April 15.
D.   A tax of $1,000 per dog alive on April 15.
E.   A tax of $1,000 per person born before 1990.

25. The US Social Security system transfers income from the young to the elderly, and so reduces the capital stock in the economy and drives up the interest rate. This means that the system is:

A.   Inefficient
B.   Creating externalities
C.   Causing a market failure
D.   Transferring income from future generations.
E.   Transferring income to future generations

Part B: Short Answer Questions

(3 questions, worth 50 points in total. Points for each part in parentheses.)

Instructions: Show any calculations needed to derive your answer.

1. Suppose that a monopolist has a total cost of $30 + 4Q$. Suppose the demand curve is $P = 12 - Q$. If the monopolist can charge only one price calculate:

(a) The profit maximizing price and quantity. (6)

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(b) The size of the profits. (4)

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(c) Suppose the monopolist can PERFECTLY PRICE DISCRIMINATE. What are his profits now? (4)

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(d) If the monopolist can charge only one price, and a tax of $2 per unit is collected from him by the government what is the new profit maximizing output? (4)

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2. (a) Suppose a firm is a monopolistic competitor in an industry in long run equilibrium where there is no price discrimination. What two conditions will firms satisfy? (4)
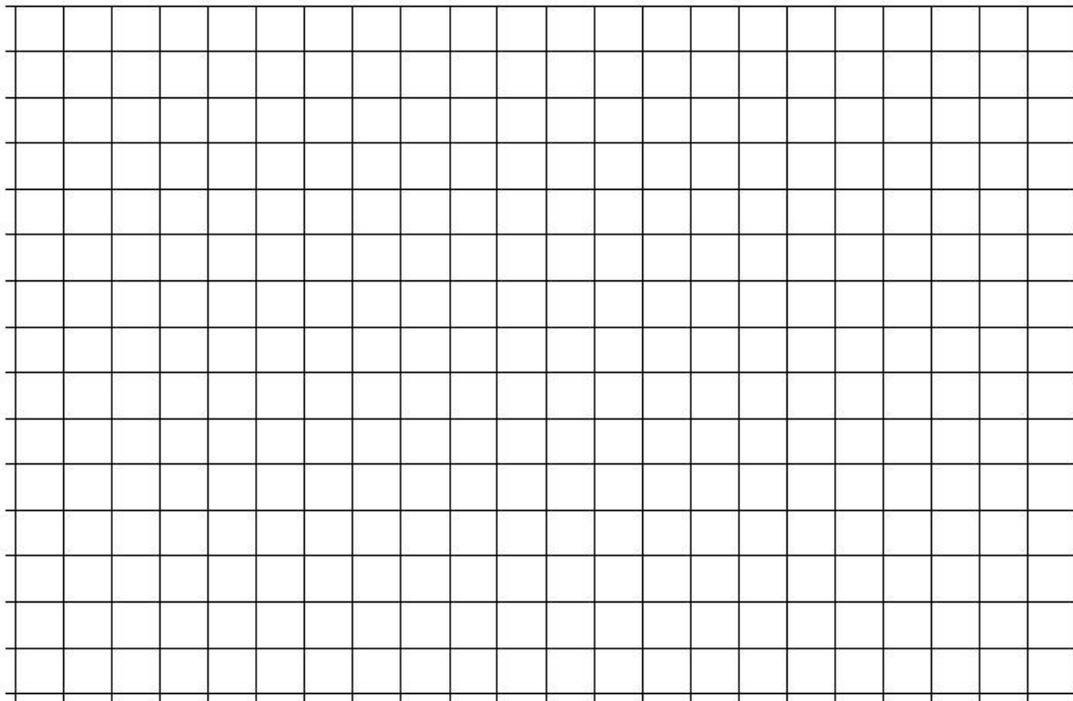
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(b) On the diagram below draw its demand curve (D), marginal revenue curve (MR), marginal cost curve (MC) and average cost curve (AC). Label each curve clearly with D, MR etc, and show where they intersect (10).

3. It is 1840 and you are in the heart of Dickensian London. Coal is supplied to households for heating and cooking in a perfectly competitive market for coal. The supply curve for coal is given by $P = 1 + Q$, where P is in $m and Q is millions of tons of coal. The demand for coal is $Q = 10 - (P/2)$

(a)   On the diagram below show the demand and supply curves for coal. Calculate the equilibrium price and quantity. (4)

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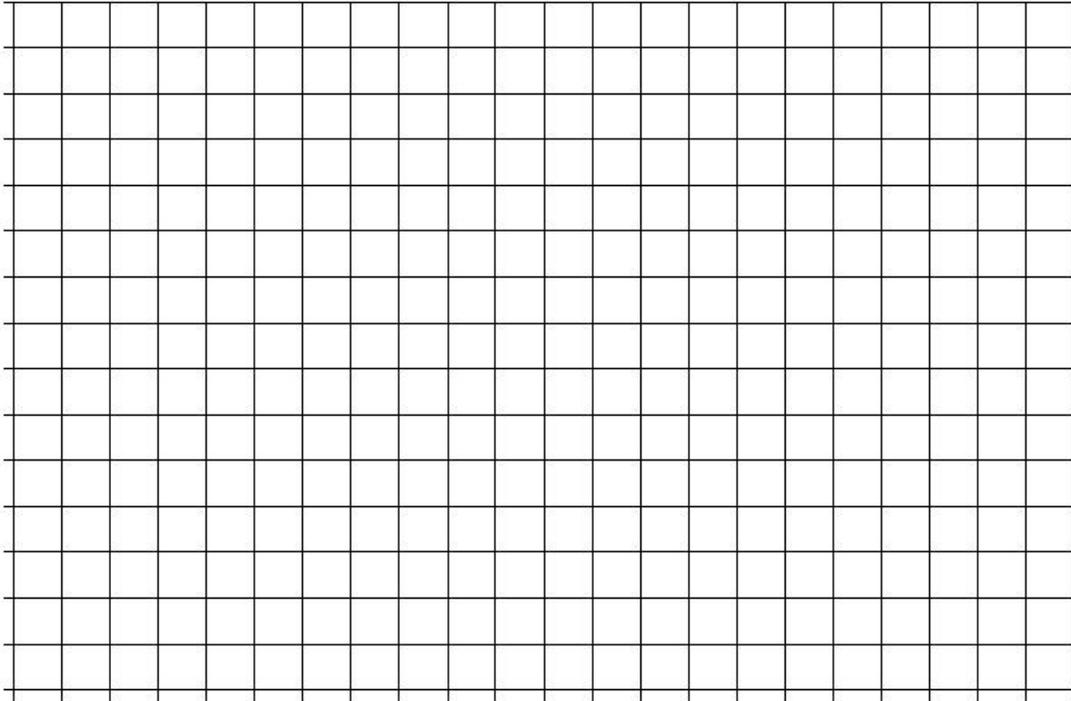
(b)   What is another name for the supply curve? (2)

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_____

(c)   Suppose that coal fires cause air pollution, and that the economic cost of this externality per million tons of coal rises with the amount used so that the marginal social cost of using coal is 1+5Q. Show this marginal social cost on your diagram. What rule must be followed for efficient use of coal. Calculate the efficient quantity of coal use in millions of tons. (4)

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(d)   Show what tax in $ per ton needs to be imposed to induce the market to deliver the efficient quantity of coal. (3)

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(e)   Calculate the social cost of the uncorrected externality? (5)

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