Gulf University for Science and Technology

Department of Economics and Finance

Ec 101 - Principles of Microeconomics

Fall 2016-2017, Dec 2016

Final Examination, Version A

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This part should be filled by the student:

Name :.....

GUST Id:.....

Instructor:.....

Instructions

1) **The exam contains two parts. Part 1 includes Short Answer Questions. Part 2 includes multiple choice questions. The answers of Part 2 should be written to the table at the beginning of Part 2.**

2) **Please write your name and GUST ID to the exam paper**

3) **You are not allowed to share calculators**

4) **You are not allowed to use your mobiles as a calculator or any other reason**

This part will be filled by the instructor after grading is done

GRADE FROM SHORT ANSWER QUESTION 1 (out of 16)	
GRADE FROM SHORT ANSWER QUESTION 2: (out of 24)	
GRADE FROM PART 2 (MULTIPLE CHOICE QUESTIONS): (out of 60)	
GRADE FROM BONUS QUESTIONS: (out of 3)	
TOTAL GRADE: (out of 100)	

PART 1 - SHORT ANSWER QUESTIONS

1- (16 points)

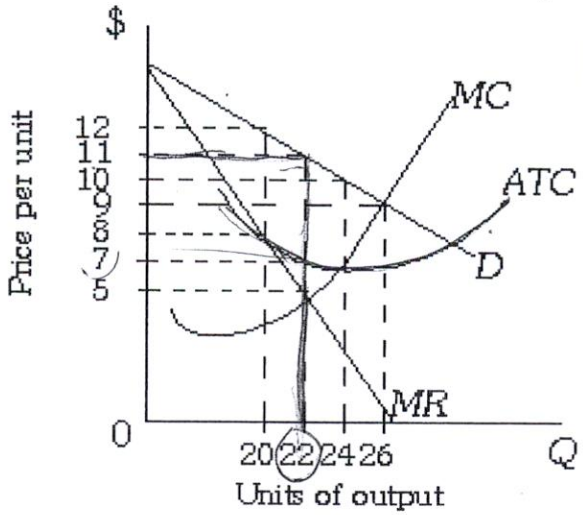


Figure 10.3

a) Refer to Figure 10.3. The profit-maximizing level of output for this monopolist is _____ units of output. (2 points) Why? (2 points)

b) Refer to Figure 10.3. What is the profit-maximizing price for this firm? (3 points)

c) Refer to Figure 10.3. If this firm is producing the profit-maximizing quantity and selling it at the profit-maximizing price, what will be the firm's total revenue? (3 points)

d) Refer to Figure 10.3. If this firm is producing the profit-maximizing quantity and selling it at the profit-maximizing price, what will be the firm's total cost? (3 points)

e) Refer to Figure 10.3. If this firm is producing the profit-maximizing quantity and selling it at the profit-maximizing price, what will be the firm's profit? (3 points)

2) Refer to the data of a perfectly competitive firm, provided in Table 3 below to answer the questions that follow. (Total: 24 points)
Note: ---- means not defined.

q	TFC	TVC	TC	MC	AVC	ATC
0	50	0	50	----	----	----
1	50	20		20	20	
2	50				15	
3	50					31.67
4	50	62	112			
5	50					28
6	50				22	
7	50			54		

a)Refer to Table 3. Please find the missing cells for the above perfectly competitive firm. (9 points)

b) Refer to Table 3. If the market price is $42, how much output should the firm produce to maximize profits? (3 points)

c) Refer to Table 3. If the market price is $42, what is the value of highest (maximum) profit that the firm can make? (3 points)

d) Refer to Table 3. If the market price is $42, then in the long run, if cost conditions do not change, what will the firm do? (3 points)

e) Refer to Table 3. If the market price is $20, then in the long run, if cost conditions do not change, what are the long run implications? (3 points)

f) Refer to Table 3. At which price level, this firm will earn a zero economic profit? (3 points)

PART II – MULTIPLE CHOICE QUESTIONS

Please write the answers of Part II to the table below. Only this table will be graded for Part II. Write either A or B or C or D as the answer. If you think that the correct answer does not answer, write E as the answer. **Each MCQ is worth 2 points**

1)	**6)**	**11)**	**16)**	**21)**	**26)**
2)	**7)**	**12)**	**17)**	**22)**	**27)**
3)	**8)**	**13)**	**18)**	**23)**	**28)**
4)	**9)**	**14)**	**19)**	**24)**	**29)**
5)	**10)**	**15)**	**20)**	**25)**	**30)**

BONUS QUESTIONS (Total: 3 points)

1)	2)	3)	4)	5)	6)

1) The Supply Room, a mail-order school supply store, grew rapidly. As a result of achieving a much larger size, the Supply Room is able to realize (1) volume discounts when buying from its suppliers, and (2) lower transportation costs by shipping in bulk. The best explanation of this is that the Supply Room seems to be experiencing

A) decreasing returns to scale.
B) constant returns to scale.
C) increasing returns to scale.
D) ways to get around the law of diminishing marginal returns.

2) If at a sales level of 100 units a monopolist's marginal revenue is $5, then

A) total revenue is $500.
B) at a sales level of more than 100 units, marginal revenue will be more than $5.
C) at a sales level of more than 100 units, marginal revenue will be less than $5.
D) at a sales level of less than 100 units, marginal revenue will be $5.

3) Suppose that Nancy owns and operates a drug store with total revenues of $30 million in 2002. She does not earn a salary at the job. Her accounting costs for the year were $25 million. She could have earned $3 million that year if she had worked as a consultant for the pharmaceutical industry. She invested $40 million in the business, and current interest rates (in 2002) are 5 percent. For 2002,

A) Nancy's accounting profit is $5 million and her economic profit is $3 million.
B) Nancy's accounting profit is $5 million and her economic profit is zero.
C) Nancy's accounting profit is $5 million and her economic profit is $38 million.
D) Nancy's accounting profit is zero and her economic profit is $3 million.

4) When a profit-maximizing firm produces an output at which marginal revenue is less than marginal cost, the firm is

A) producing too much.
B) producing too little.
C) making a profit.
D) making a loss.

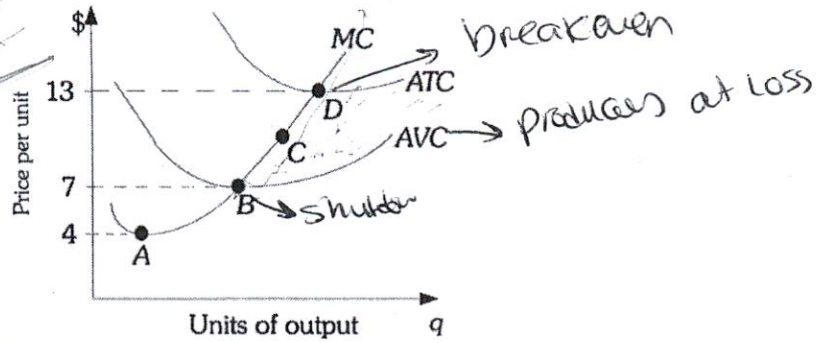


Figure 1

5) Refer to Figure 1. This firm's short-run supply curve is the firm's
A) marginal cost curve above Point A.
B) marginal cost curve above Point D.
C) AVC curve to the right of Point B.
D) marginal cost curve above Point B.

6) Refer to Figure 1. This firm's shutdown point corresponds to Point
A) B
B) A
C) C
D) D

7) Refer to Figure 1. This firm will earn an operating profit (operate in the short run), but incur an economic loss if price is
A) between $0 and $4.
B) between $4 and $7.
C) above $13.
D) between $7 and $13.

8) Refer to Figure 1. This firm will earn an economic profit if price is
A) between $0 and $4.
B) between $4 and $7.
C) above $13.
D) between $7 and $13.

9) When Glaxo-Wellcome introduced AZT, an AIDS drug, it was able to enjoy high profits because of
A) barriers to entry provided by patents.
B) the widespread use of the drug among ordinary people.
C) the quick response of rivals in introducing substitute drugs.
D) its low prices.

10)In the long run,
A) a firm can shut down, but it cannot exit the industry.
B) all firms must make economic profits.
C) a firm can vary all inputs, but it cannot change the mix of inputs it uses.
D) there are no fixed factors of production.

11) Which of the following is the set of conditions necessary for long-run equilibrium for a perfectly competitive firm?
A) P > SRMC = SRAC = LRAC
B) P = SRMC < SRAC = LRAC
C) P = SRMC = SRAC = LRAC
D) P = SRMC = SRAC > LRAC

12) Which of the following is an example of diseconomies of scale?
A) A firm increases in size and is therefore able to lower its health insurance costs because as the size of the group insured increases, the premium per person decreases substantially.
B) As the demand for calculators decreased, the price of calculators actually rose.
C) As a firm hires additional workers each worker adds less to total output than the previous worker.
D) As the computer industry has expanded, demand for professionally trained computer programmers has also increased, which has caused the salaries of computer programmers to increase.

13) As long as economic profits are being earned in an industry, firms will _____ the industry and the supply curve will shift to the _____.
A) exit; right
B) enter; left
C) enter; right
D) exit; left

MP: 90 − 80 = 10

AP: $\frac{TP}{L} = \frac{90}{3} = 30$

14) Assume the total product of two workers is 80 and the total product of three workers is 90. The average product of the third worker is _____, and the marginal product of the third worker is _____.
A) 10; 13.33
B) 160; 270
C) 10; 45
D) 30; 10

L	TP	AP = TP/L	MP
2	80	40	
3	90	30	10

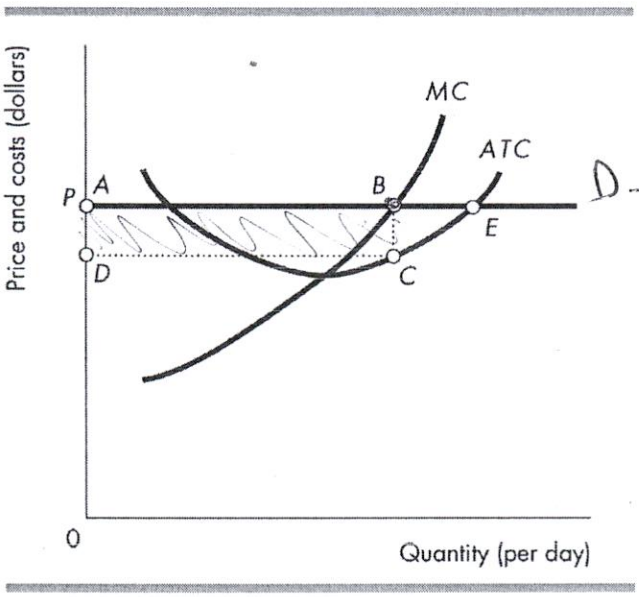
$MP = \frac{\Delta TP}{\Delta L}$

$\frac{10}{1} = 10$

15) Relative to a competitively organized industry, a monopoly is more likely to produce
A) More output, charges higher prices, and earns economic profits.
B) Less output, charges lower prices, and earns economic profits.
C) Less output, charges lower prices, and earns only a normal profit.
D) Less output, charges higher price, and earns economic profits.

16) For a monopolist to sell more units of output,
A) The price must be increased.
B) The price must be reduced.
C) Demand must become more elastic.
D) The other competing firms must sell fewer units.

17) The demand curve facing a monopolist is _____.
A) upward-sloping
B) downward-sloping
C) horizontal
D) vertical



D → perfectly competitive

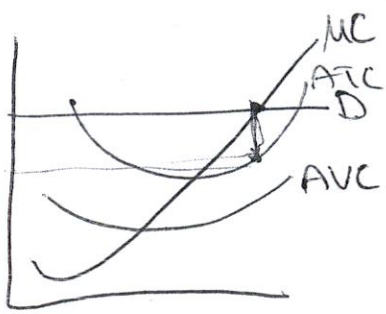


Figure 3

18) Consider the perfectly competitive firm in Figure 3. At the profit maximizing level of output, the firm will
A) make an economic profit equal to the area *AECD*.
B) make zero economic profit.
C) make an economic profit equal to the area *ABCD*.
D) incur an economic loss equal to the area *ABCD*.

19) In the long-run equilibrium for a perfectly competitive market,
A) average total costs of production are minimized.
B) there is no incentive for entry or exit.
C) the firms' economic profits are zero.
D) All of the above are correct.

20) Suppose a new vaccine for Lyme disease is developed by Merck, a large drug company. Which of the following is most likely to occur?
A) Merck will have a monopoly on this vaccine because of economies of scale.
B) Merck will not tell anyone about its discovery though it will sell the vaccine.
C) Other firms will quickly copy the formula making the market for the vaccine competitive.
D) Merck will apply for a patent on the vaccine that grants it the monopoly rights to the vaccine for many years.

21) An industry in which economies of scale allow one firm to supply the entire market at the lowest possible cost is called a
A) single-price monopoly.
B) one-firm monopoly.
C) legal monopoly.
D) natural monopoly.

22) Monopolies can earn an economic profit in the long run because of
A) the cost-savings gained by the monopoly.
B) barriers to enter the monopoly's market.
C) rent seeking by competitors.
D) the elastic demand for the monopoly's product.

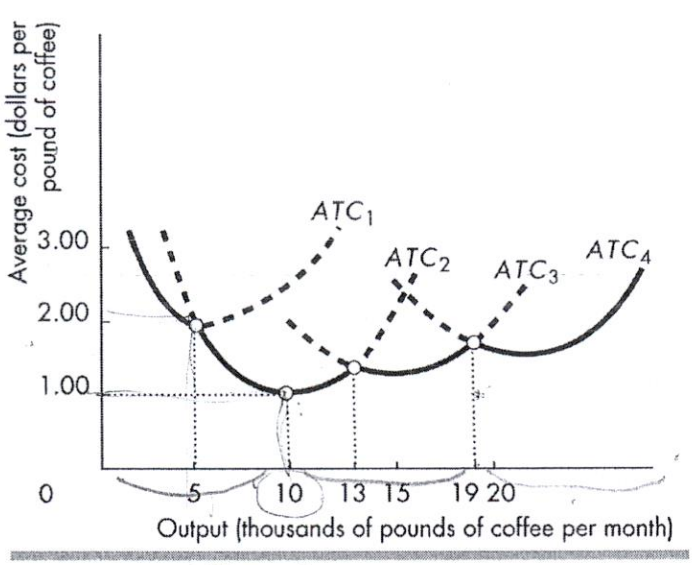


Figure 5

23) In Figure 5, economies of scale are present up to an output level of
A) 5,000 pounds of coffee.
B) 15,000 pounds of coffee.
C) 13,000 pounds of coffee.
D) 10,000 pounds of coffee.

24) In Figure 5, the minimum efficient scale of output is
A) 13,000 pounds of coffee.
B) 10,000 pounds of coffee.
C) 15,000 pounds of coffee.
D) 5,000 pounds of coffee.

25) One reason for diseconomies of scale is that, at very large scales, management systems can become
A) more numerous than the workers they manage.
B) more efficient because they can effectively manage more workers.
C) increasingly complex and inefficient.
D) none of the above

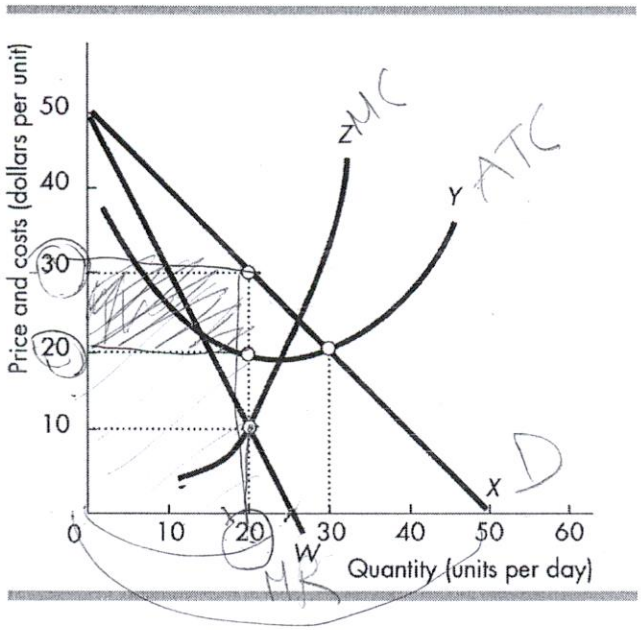


Figure 4

26) In Figure 4, the curve labeled "*X*" can be a
A) marginal revenue curve faced by a perfectly competitive firm.
B) demand curve faced by a perfectly competitive firm.
C) demand curve faced by a monopolist.
D) marginal revenue curve faced by a monopolist.

27) In Figure 4, the curve labeled "*W*" can be a
A) monopoly's demand curve.
B) perfectly competitive firm's demand curve.
C) monopoly's marginal revenue curve.
D) perfectly competitive firm's marginal revenue curve.

28) In Figure 4, the curve labeled "*Y*" can be a
A) monopoly's demand curve.
B) perfectly competitive firm's average total cost curve.
C) monopoly's marginal revenue curve.
D) perfectly competitive firm's marginal revenue curve.

29) The marginal cost (*MC*) curve intersects the
A) *ATC*, *AVC*, and *AFC* curves at their minimum points.
B) *AVC* and *AFC* curves at their minimum points.
C) *ATC* and *AVC* curves at their minimum points.
D) *ATC* and *AFC* curves at their minimum points.

30) As output increases, total cost _____, total fixed cost _____, and total variable cost _____.
A) does not change; increases; increases
B) increases; does not change; increases
C) increases; increases; does not change
D) increases; increases; increases

BONUS QUESTIONS (Total: 3 points)

1) An example of _____ is a steel mill generating air pollution.
A) a negative production externality
B) the free-rider problem
C) a positive production externality
D) a public good

2) A well-maintained house and yard is an example of
A) a public good.
B) a positive externality.
C) logrolling.
D) a negative externality.

3) If the government wishes to encourage firms to internalize externalities, they should _____ activities resulting in negative externalities and _____ activities resulting in positive externalities
A) ban; generate
B) tax; subsidize
C) place an injunction against; tax
D) subsidize; tax

4) In the presence of negative externalities, _____ is produced and in the presence of positive externalities, _____ is produced.
A) too much of the good; too little of the good
B) too little of the good; too much of the good
C) too much of the good; the right amount of the good
D) the right amount of the good; too little of the good

5) Public goods are _____ in consumption and their benefits are _____.
A) rival; excludable
B) nonrival; nonexcludable
C) nonrival; excludable
D) rival; nonexcludable

6) Because people enjoy the benefits of public goods whether they pay for them or not, people are usually unwilling to pay for them. This is known as the _____ problem.
A) free-rider
B) nonrival
C) nonexcludable
D) drop-in-the-bucket