TROY PROGRAM

Exam Type: **Final**
Course Code: **HSECO2520**
Class No.:
Exam Mode: **Closed Book**
Course Name: **Principles of Microeconomics**
Semester: **Fall 2023**
Time Allowed: **60 minutes**
Exam Code: **234**
Academic Year: **2023-2024**

Student Name: [redacted] ……… *Student ID:* [redacted] … *Signature:* ………

Grade	Examiners' Signature	Proctor's Signature

Part 1: Multiple – Choice Questions (30 points)

Answer the multiple-choice questions in the table below by marking (x) in ONE corresponding box to the order of question, and answer options in the test.

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

Q 1: A monopoly is an inefficient way to produce a product because

A. it produces a smaller level of output than would be produced in a competitive market.
B. it faces a downward-sloping demand curve.
C. the cost to the monopolist of producing one more unit exceeds the value of that unit to potentialbuyers.
D. it can earn both short-run and long-run profits.

Q 2: Bev is opening her own court-reporting business. She financed the business by withdrawing money from her personal savings account. When she closed the account, the bank representative mentioned that she would have earned \$300 in interest next year. If Bev hadn't opened her own business, she would have earned a salary of \$25,000. In her first year, Bev's revenues were \$30,000. Which of the following statements is correct?

A. Bev's total explicit costs are \$25,300.
B. Bev's accounting profits exceed her economic profits by \$300.
C. Bev's total implicit costs are \$300.
D. Bev's economic profit is \$4,700.

Q 3: A profit-maximizing firm will shut down in the short run when

A. average revenue is greater than average fixed cost.
B. price is less than average variable cost.
C. price is less than average total cost.
D. average revenue is greater than marginal cost.

Q 4: In a game, a dominant strategy is

A. a strategy that must appear in every game.
B. the best strategy for a player to follow, regardless of the strategies followed by other players.
C. a strategy that leads to one player's interests dominating the interests of the other players.
D. the best strategy for a player to follow only if other players are cooperative.

Q 5: Technology spillover is one type of

A. producer surplus.
B. negative externality.
C. subsidy.
D. positive externality.

Q 6: The firm under monopolistic competition is likely to produce less and set a higher price than under perfect competition because

A. The firm faces increasing costs
B. The firm faces decreasing returns to scale
C. The firm operates where marginal revenue equals marginal cost
D. The firm faces a downward sloping demand curve

Q 7: A market is competitive if (i) firms have the flexibility to price their own product; (ii) each buyer is small compared to the market; (iii) each seller is small compared to the market.

A. (i), (ii), and (iii)
B. (i) and (ii) only
C. (i) and (iii) only
D. (ii) and (iii) only

Q 8: Writing total output as Q, change in output as ΔQ, total labor employment as L, and change in labor employment as ΔL, the marginal product of labor can be written algebraically as

A. ΔQ / ΔL
B. ΔL / ΔQ
C. ΔQ*L
D. Q / L

Q 9: A function that indicates the maximum output per unit of time that a firm can produce, for every combination of inputs with a given technology, is called:

A. a production function
B. an iso-cost function
C. a production possibility curve
D. an isoquant

Q 10: A competitive firm will hire workers up to the point at which the value of the marginal product of labor equals the

A. wage.
B. average variable cost.
C. average total cost.
D. price per unit of output.

Q 11: The supply curve for the monopolist

A. is horizontal.
B. is upward sloping.
C. does not exist.
D. is vertical.

Q 12: Which of the following statements best reflects a price-taking firm?

A. Price-taking firms maximize profits by charging a price above marginal cost.
B. The firm has an incentive to charge less than the market price to earn higher revenue.
C. If the firm were to charge more than the going price, it would sell none of its goods.
D. The firm can sell only a limited amount of output at the market price before the market price will fall.

Q 13: The rental price of capital is

A. the price paid to use capital for a limited timeperiod.
B. always more than the purchase price.
C. the price paid for ownership of the capital.
D. determined outside the realm of factor markets.

Q 14: Which of the following statements is NOT correct?

A. Fixed costs are constant.
B. Variable costs change as output changes.
C. Average total costs are typically U-shaped.
D. Average fixed costs are constant.

Q 15: Which of the following formulas would correctly calculate a monopolist's profit?

A. profit = price – marginal cost
B. profit = (price – average total cost) × quantity
C. profit = (price – marginal cost) × quantity
D. profit = price – average total cost

Q 16: The higher the concentration ratio, the

A. less competitive the industry.
B. more control an individual firm has to set prices.
C. more competitive the industry.
D. Both a and b are correct.

Q 17: Which of the following illustrates the concept of a negative externality?

A. A janitor eats a Big Mac during his lunch break.
B. A flood wipes out a farmer's entire corn crop.
C. A college student plays his new stereo system at 2:00 a.m.
D. A college professor plays a vigorous game of racquet ball with the racquet he recently purchased.

Q 18: As a group, oligopolists would always earn the highest profit if they would

A. operate according to their own individual self-interests.
B. produce more than the perfectly competitive quantity of output.
C. charge the same price that a monopolist would charge if the market were a monopoly.
D. produce the perfectly competitive quantity of output.

Q 19: Which of the following would be most likely to have monopoly power?

A. an online bookstore
B. a local electrical cooperative
C. a national florist
D. a local restaurant

Q 20: At the profit-maximizing level of output,

A. marginal revenue equals average variable cost.
B. average revenue equals average total cost.
C. marginal revenue equals marginal cost.
D. marginal revenue equals average total cost.

Q 21: An externality exists when

A. markets are not able to reach equilibrium.
B. a person engages in an activity that influences the well-being of a bystander and yet neither pays nor receives payment for that effect.
C. the government intercedes in the operation of private markets by forcing the market to adjust to the balance of supply and demand.
D. a firm sells its product in a foreign market.

Q 22: Owners of land are compensated according to the

A. absolute level of production from the land.
B. purchase price of the land stock.
C. value of the marginal product of land.
D. number of laborers the land can support.

Q 23: Average total cost is equal to

A. output/total cost.
B. total cost/output.
C. average variable cost + total fixed cost.
D. total cost - total quantity of output.

Q 24: If firms in monopolistic competition are enjoying positive economic profits, in the long run:

A. they will continue enjoying such profits, since new firms will be unable to enter the industry.
B. consumers will cease wanting to buy the good and will switch to cheaper alternatives.
C. the government will have to step in and regulate the price.
D. this will attract new firms into the industry, causing prices to drop and profits to disappear.

Q 25: Which of the following is an example of an implicit cost?

A. foregone rent on office space owned and used by the firm
B. salaries paid to owners who work for the firm
C. cash payments for raw materials
D. interest on money borrowed to finance equipment purchases

Q 26: Which of the following statements is correct?

A. If duopolists successfully collude, then their combined output will be equal to the output that would be observed if the market were a monopoly.
B. Although the logic of self-interest increases a duopoly's level of output above the monopoly level, it does not push the duopolists to reach the competitive level.
C. Although the logic of self-interest decreases a duopoly's price below the monopoly price, it doesnot push the duopolists to reach the competitive price.
D. All of the above are correct.

Q 27: To increase their individual profits, members of a cartel have an incentive to

A. increase production above the level agreed upon.
B. charge the same price a monopolist would charge.
C. charge a higher price than the other members of the cartel.
D. ignore the choices made by the other firms and act as a monopolist.

Q 28: Which of the following inputs are variable in the long run?

A. labor
B. capital and equipment
C. plant size
D. all of these

Q 29: For a firm in a perfectly competitive market, the price of the good is always

A. greater than average revenue.
B. equal to total revenue.
C. equal to marginal revenue.
D. equal to the firm's efficient scale of output.

Q 30: A major argument in favor of advertising is that:

A. it promotes competition among firms in the industry, leading to lower prices.
B. it provides information to consumers that allows them to make better choices.
C. it helps people reaffirm their tastes and preferences.
D. it will lower the market price.

Part 2: Problem Solving (30 points)

Problem 1:

Given demand - supply function for the product as follows:

$Q_D = 210 - 20P$

$Q_S = 10P - 30$

a. Determine equilibrium price and quantity? Illustrate by a demand – supply diagram.

b. Calculate the price elasticity of demand at the market equilibrium price? State the meaning of the result.

c. When the government sets a price floor of $P = \$9$, is the market surplus or shortage of products? In what quantity?

d. The government imposes a tax of \$1 per unit on seller. Determine the new equilibrium price and quantity?

Problem 2:

The demand function for software market is $P = 18 - 0.6Q$. There is only ACC firm in the market. The firm's cost structure is:

$$TC = 0.6Q^2 + 6Q + 12$$

a. Determine the best level of output of the firm. the price at which the firm sells its product to maximize profit, as well as the profit per unit and in total?

b. Find firm's output and total profits when government sets ceiling price per unit of \$10?

c. Find the best level of output of the firm and the price at which the firm sells its product to maximize revenue? Calculate the firm's total profit.

d. Find firm's maximum output and price at break-even (that is its total revenue equals total costs)?

Part 2: Problem Solving (30 points)

Problem 1:

Given demand - supply function for the product as follows:

$Q_D = 120 - 20P$

$Q_S = 10P - 30$

a. Determine equilibrium price and quantity? Illustrate by a demand – supply diagram.
b. Calculate the price elasticity of demand at the market equilibrium price? State the meaning of the result.
c. When the government sets a price ceiling of P = \$4, is the market surplus or shortage of products? In what quantity?
d. The government imposes a tax of \$1 per unit on seller. Determine the new equilibrium price and quantity?

Problem 2:

The demand and cost function for a company is estimated to be as follows:

$P = 190 - 0.5Q$

$TC = 4000 + 10Q + 0.5Q^2$

a. Write the following cost function: ATC, VC, AVC and MC?
b. What price should the company charge if it wants to maximize its profit in the short-run? Calculate the company's total profits?
c. What price should it charge if it wants to maximize its revenue in the short run? Calculate the company's total revenue?
d. Find firm's maximum output and price at break-even (that is its total revenue equals total costs)?