McMaster University
Department of Economics

ECON 1B03
Midterm Test #2

VERSION 2

Instructor: Professor H Holmes
Duration: 1.5 hours
Total Number of Pages: 11

INSTRUCTIONS:

Answer all questions on the scan sheets. USE AN HB PENCIL ONLY. Make sure you carefully fill in the bubbles. YOU MUST FILL IN YOUR STUDENT NUMBER, AND VERSION NUMBER ON THE SCAN SHEET OR YOUR GRADE WILL NOT BE RECORDED AND YOU WILL LOSE THE BONUS MARK.

You may use the Casio FX calculator.

Hand in the scan sheet and this test copy.

TOTAL MARKS AVAILABLE: 45

NAME:_____

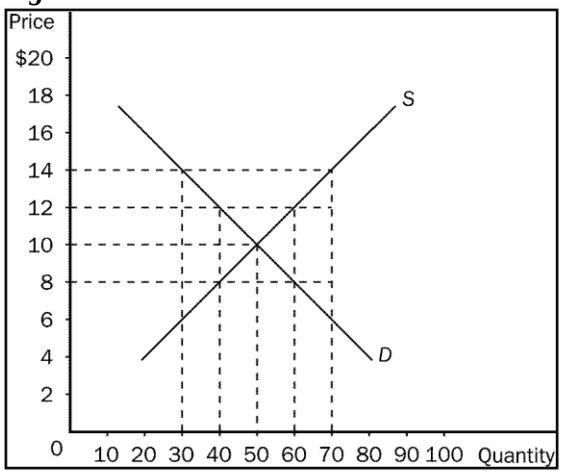
STUDENT #: _____

MUGSI ID: _____

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. A price floor
a. is a legal minimum on the price at which a good can be sold.
b. is a legal maximum on the price at which a good can be sold.
c. will generally result in a market shortage.
d. will benefit the consumer, but hurt the supplier.

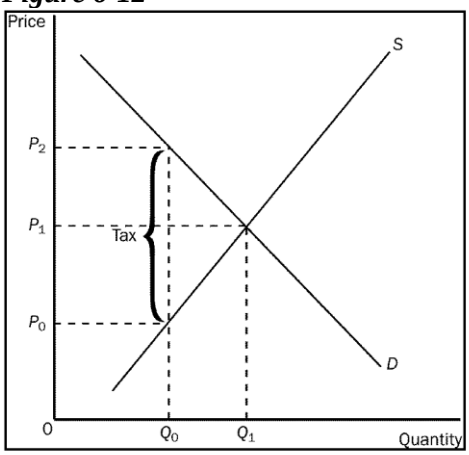
Figure 6-2



____ 2. **Refer to Figure 6-2**. A binding price floor would exist at
a. a price of $10.00.
b. a price of $8.00.
c. any price above $10.00.
d. any price below $10.00.

____ 3. A binding price ceiling will make it necessary to
a. supply more of the product.
b. develop a way of rationing the product, because there will be a shortage.
c. develop a better marketing plan, because there will be a surplus.
d. increase demand for the product.

Figure 6-12



____ 4. **Refer to Figure 6-12**. The equilibrium price before the tax is
a. P_0.
b. P_1.
c. P_2.
d. None of the above are correct.

____ 5. **Refer to Figure 6-12**. The price that will be paid after the tax is
a. P_0.
b. P_1.
c. P_2.
d. impossible to determine.

____ 6. **Refer to Figure 6-12**. The price sellers receive after the tax is
a. P_0.
b. P_1.
c. P_2.
d. impossible to determine.

____ 7. **Refer to Figure 6-12**. The per unit burden of the tax on buyers is
a. P_2 minus P_0.
b. P_2 minus P_1.
c. P_1 minus P_0.
d. Q_1 minus Q_0.

____ 8. **Refer to Figure 6-12**. The per unit burden of the tax on the sellers is
a. P_2 minus P_0.
b. P_2 minus P_1.
c. P_1 minus P_0.
d. Q_1 minus Q_0.

____ 9. **Refer to Figure 6-12 on the previous page**. The amount of the tax imposed is
a. P_2 minus P_0.
b. P_2 minus P_1.
c. P_1 minus P_0.
d. Q_1 minus Q_0.

____ 10. Which of the following is the most correct statement about tax burdens?
a. A tax burden falls most heavily on the side of the market that is more elastic.
b. A tax burden falls most heavily on the side of the market that is more inelastic.
c. A tax burden falls most heavily on the side of the market that is closer to unit elastic.
d. A tax burden is distributed independently of relative elasticities of supply and demand.

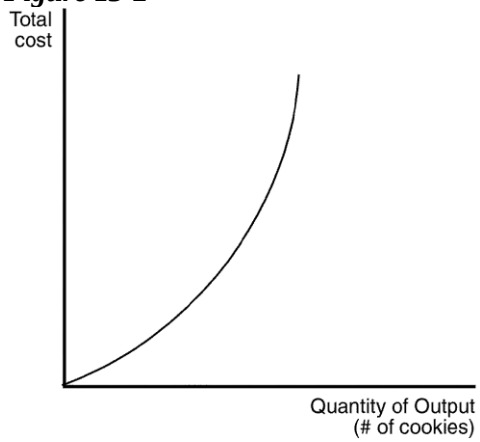
____ 11. Suppose that the demand for picture frames is price elastic and the supply of picture frames is price inelastic. A tax of $1 per frame levied on buyers of picture frames will increase the equilibrium price paid by buyers of picture frames by
a. $1.
b. more than $0.50 but less than $1.00.
c. less than $0.50.
d. It is impossible to say without more information.

____ 12. A quota in the barley market means consumers now pay a price of $30 per bushel. At the quota quantity, suppliers have a willingness to sell of $10 per bushel. The quota rent is
a. $30
b. $10
c. $20
d. $40

____ 13. The marginal product of labour can be defined as
a. change in profit/change in labour.
b. change in output/change in labour.
c. change in labour/change in output.
d. change in labour/change in total cost.

The figure below depicts a total cost function for a firm that produces cookies. Use the figure to answer the following questions.

Figure 13-2



____ 14. **Refer to Figure 13-2 on the previous page**. Which of the statements below is most consistent with the shape of the total cost curve?
a. Producing an additional cookie is always more costly than producing the previous cookie.
b. Total production of cookies decreases with additional units of input.
c. Producing additional cookies is equally costly, regardless of how many cookies are already being produced.
d. Producing additional cookies becomes increasingly costly only when the number of cookies already being produced is large.

____ 15. Suppose a certain firm is able to produce 160 units of output per day when 15 workers are hired. The firm is able to produce 176 units of output per day when 16 workers are hired (holding other inputs fixed). Then the marginal product of the 16th worker is
a. 10 units of output.
b. 11 units of output.
c. 16 units of output.
d. 176 units of output.

____ 16. Average total cost is equal to
a. output/total cost.
b. total cost - total quantity of output.
c. average variable cost + total fixed cost.
d. total cost/output.

____ 17. The amount by which total cost rises when the firm produces one additional unit of output is called
a. average cost.
b. marginal cost.
c. fixed cost.
d. variable cost.

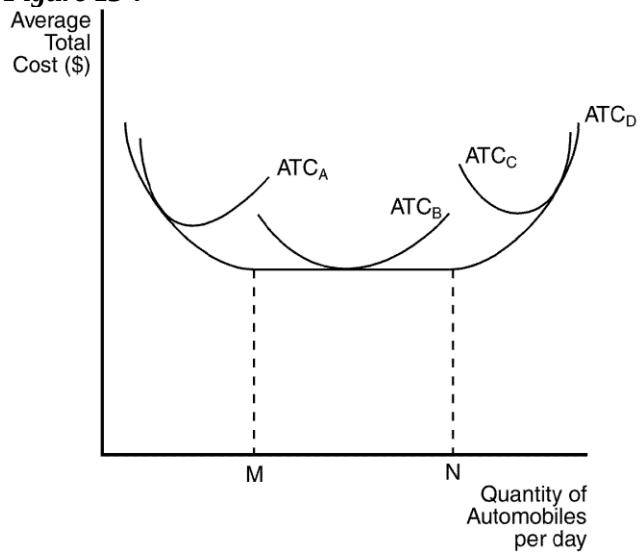
____ 18. If marginal cost is rising,
a. average variable cost must be falling.
b. average fixed cost must be rising.
c. marginal product must be falling.
d. marginal product must be rising.

____ 19. When marginal cost exceeds average total cost,
a. average fixed cost must be rising.
b. average total cost must be rising.
c. average total cost must be falling.
d. marginal cost must be falling.

____ 20. The firm's efficient scale is the quantity of output that minimizes
a. average total cost.
b. average fixed cost.
c. average variable cost.
d. marginal cost.

The figure below depicts average total cost functions for a firm that produces automobiles. Use the figure to answer the following questions.

Figure 13-7



____ 21. **Refer to Figure 13-7**. In the long run, the firm can operate on which of the following average total cost curves?
a. ATC_A
b. ATC_B
c. ATC_C
d. All of the above are correct.

____ 22. **Refer to Figure 13-7**. At levels of output below M the firm experiences
a. economies of scale.
b. diseconomies of scale.
c. economic profit.
d. accounting profit.

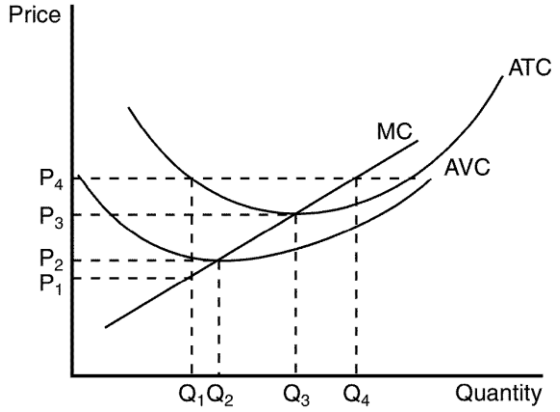
____ 23. When a firm in a competitive market receives $500 in total revenue, it has a marginal revenue of $10. What is the average revenue, and how many units were sold?
a. $5 and 100
b. $10 and 50
c. $10 and 100
d. The answer cannot be determined from the information given.

____ 24. If a firm in a competitive market reduces its output by 20 percent, then as a result the price of its output is likely to
a. increase.
b. remain unchanged.
c. decrease by less than 20 percent.
d. decrease by more than 20 percent.

____ 25. In a competitive market,
a. each seller can sell all he wants to sell at the going price.
b. buyers and sellers are price takers.
c. the goods offered by the different sellers are largely the same.
d. All of the above are correct.

The graph below depicts the cost structure for a firm in a competitive market. Use the graph to answer the following questions.

Figure 14-2



____ 26. **Refer to Figure 14-2**. When price rises from P_2 to P_3, the firm finds that
a. marginal cost exceeds marginal revenue at a production level of Q_2.
b. if it produces at output level Q_3 it will earn a positive profit.
c. expanding output to Q_4 would leave the firm with losses.
d. All of the above are correct.

____ 27. **Refer to Figure 14-2**. When price falls from P_3 to P_1, the firm finds that
a. fixed cost is higher at a production level of Q_1 than it is at Q_3.
b. it should produce Q_1 units of output.
c. it should produce Q_3 units of output.
d. it is unwilling to produce any output.

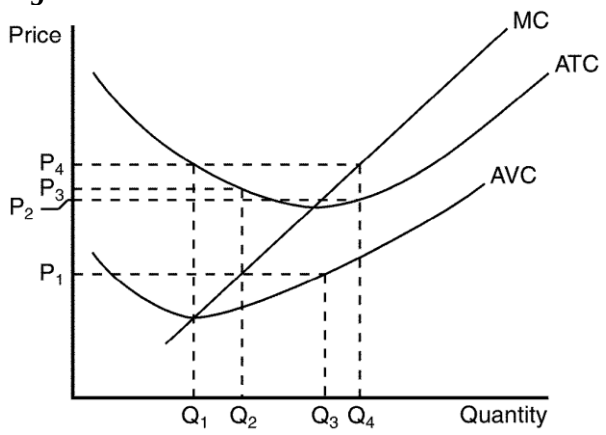
____ 28. **Refer to Figure 14-2**. Which of the following statements best reflects the situation faced by the firm when price falls from P_4 to P_2?
a. Average total cost is lower than at the previous level of output so it increases production.
b. The firm will earn profit equal to $(P_4 - P_2) \times Q_2$.
c. Marginal revenue is lower than marginal cost at the previous level of output, so it decreases production.
d. Marginal revenue is higher than marginal cost at the previous level of output, so it increases production.

____ 29. When price is below average variable cost, a firm in a competitive market will
a. shut down and incur fixed costs.
b. shut down and incur both variable and fixed costs.
c. continue to operate as long as average revenue exceeds marginal cost.
d. continue to operate as long as average revenue exceeds average fixed cost.

____ 30. Profit-maximizing firms enter a competitive market when, for existing firms in that market,
a. total revenue exceeds fixed costs.
b. total revenue exceeds total variable costs.
c. average total cost exceeds average revenue.
d. price exceeds average total cost.

The figure below depicts the cost structure of a firm in a competitive market. Use the figure to answer the following questions.

Figure 14-6



____ 31. **Refer to Figure 14-6**. When market price is P_4, a profit-maximizing firm's total cost can be represented by the area
a. $P_4 \times Q_1$
b. $P_4 \times Q_4$
c. $P_2 \times Q_4$
d. Total costs cannot be determined from the information in the figure.

____ 32. **Refer to Figure 14-6**. When market price is P_1, a profit-maximizing firm's total profit or loss can be represented by which area?
a. $P_1 \times Q_3$; profit
b. $(P_3 - P_1) \times Q_2$; loss
c. $(P_2 - P_1) \times Q_1$; loss
d. We can't tell because we don't know fixed costs.

____ 33. A profit-maximizing firm in a competitive market is able to sell its product for $9. At its current level of output the firm's average total cost is $11. Its marginal cost curve crosses the marginal revenue curve at an output level of 10 units. Then the firm experiences a
a. profit of more than $20.
b. profit of exactly $20.
c. loss of more than $20.
d. loss of exactly $20.

____ 34. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. How much will each firm produce?
a. 9
b. 90
c. 36
d. 360

____ 35. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. Profit for each firm is
a. $1800
b. $180
c. $720
d. $72

____ 36. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. In the long run, how many firms will there be in the market?
a. 16
b. 35
c. 10
d. 20

____ 37. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. Suppose the government imposes a per unit tax of $6 on firms. The new supply curve is Qs_{tax} = 2.5P - 15. The price consumers now pay is
a. $36
b. $33
c. $39
d. $42

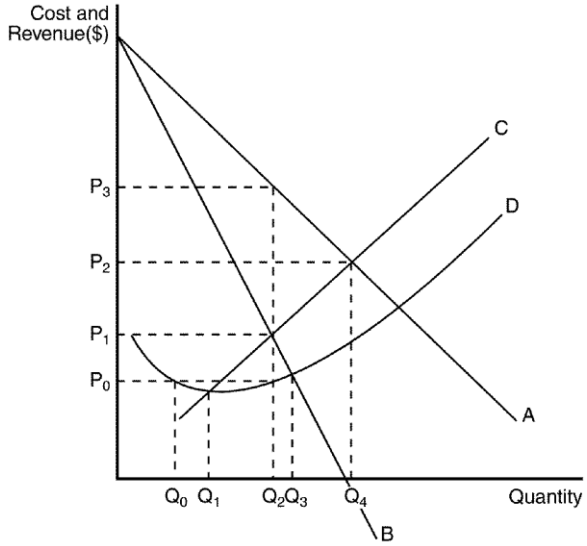
____ 38. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. Suppose the government imposes a per unit tax of $6 on firms. The new supply curve is Qs_{tax} = 2.5P - 15. The deadweight loss due to taxation is
a. $45
b. $22.50
c. $28
d. $17.50

____ 39. There are 10 identical firms in a perfectly competitive market. Market demand is Qd = 180 - 2.5P and market supply is Qs = 2.5P . Each firm has MC = 4Q and constant ATC = 16. Suppose the government imposes a per unit tax of $6 on firms. The new supply curve is Qs_{tax} = 2.5P - 15. Which curve is more elastic?
a. demand
b. pre-tax supply
c. after-tax supply
d. all have the same elasticity

____ 40. For a profit-maximizing monopolist,
a. P > MR = MC.
b. P = MR = MC.
c. P > MR > MC.
d. MR < MC < P.

The figure below reflects the cost and revenue structure for a monopoly firm. Use it to answer the following questions.

Figure 15-3



____ 41. **Refer to Figure 15-3**. A profit-maximizing monopoly's profit is equal to
a. $P_3 \times Q_2$.
b. $P_2 \times Q_4$.
c. $(P_3 - P_0) \times Q_2$.
d. $(P_3 - P_0) \times Q_4$.

____ 42. **Refer to Figure 15-3**. Profit on a typical unit sold for a profit-maximizing monopoly would equal
a. $P_2 - P_1$.
b. $P_2 - P_0$.
c. $P_3 - P_2$.
d. $P_3 - P_0$.

____ 43. A monopoly faces market demand of P = 53 - Q and MR = 53 - 2Q. Its TC = $2Q^2$ - Q and MC = 4Q.- 1. To maximize profit, the firm will charge a price of _____ and produce a quantity of _____
a. $42.20; 10.8
b. $44; 9
c. $41.10; 12.4
d. $46.80; 6.2

____ 44. A monopoly faces market demand of P = 53 - Q and MR = 53 - 2Q. Its TC = $2Q^2$ - Q and MC = 4Q - 1. The firm earns profit equal to
a. -$287, a loss
b. -$3467, a loss
c. $243
d. $396

____ 45. A monopoly faces market demand of P = 53 - Q and MR = 53 - 2Q. Its TC = $2Q^2$ - Q and MC = 4Q - 1. The deadweight loss due to monopoly is
a. $40.50
b. $81.00
c. $16.20
d. $8.10

____ 46. Professor Holmes' farmer friend named a cow after her. What is the cow's name?

a. Hannah
b. Holmesy
c. Micro
d. Helen