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Second SEM 2016/2017

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BSC in Agricultural Economics and Management

COURSE CODE: AEM 201

TITLE OF PAPER: INTERMEDIATE MICROECONOMICS

TIME ALLOWED: 2.00 HOURS

INSTRUCTION 1. ANSWER QUESTION 1 AND ANY OTHER 2 QUESTIONS

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Question 1 Multiple Choice 40 points

1. All points on or below a budget constraint

   a. are attainable with the given income.
   b. are equally desirable.
   c. represent market basket combinations that exhaust the income available.
   d. are described, in part, by a, b, and c above.

2. In a preference ordering exercise in which two baskets of goods are being considered, it is assumed by indifference theory that the consumer is able to

   a. measure the amount of pleasure expected from the preferred basket.
   b. say how much more one basket is valued over the other.
   c. calculate only the absolute value of the less desirable basket.
   d. make no absolute measure of the value of any of the market baskets.

3. the prices of both goods increase by the same percent, the budget line will

   a. shift parallel to the left.
   b. shift parallel to the right.
   c. pivot about the x axis.
   d. pivot about the y axis.
   e. none of the above.

4. Suppose an individual spends all his income on only two goods, good X and good Y. Moreover, suppose that you were asked to derive his price consumption curve for good Y. Which of the following would be allowed to vary?

   a. Money income.
   b. The tastes of the consumer.
   c. The price of good X.
   d. The price good Y.

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5. The "compensated" demand curve is the demand curve that

   a. shows only the income effect.
   b. shows only the substitution effect.
   c. shows both the income and substitution effects.
   d. shows the Giffen good demand curve.
   e. none of the above.

6. The income effect of a price change

   a. is always positive.
   b. is always negative.
   c. may be positive or negative.
   d. is associated with a change in nominal income.
   e. is caused by changes in consumer tastes.

7. When a good is an inferior good, the "non-compensated" demand curve will be

   a. relatively more elastic than the compensated demand curve.
   b. relatively more inelastic than the compensated demand curve.
   c. equally elastic but with a different intercept than the compensated demand curve.
   d. parallel to the compensated demand curve and to the right.
   e. either more elastic or more inelastic depending upon the size of the income effect.

8. When the substitution effect of a lowered price is counteracted by the income effect, the good in question is

   a. an inferior good.
   b. a substitute good.
   c. an independent good.
   d. a normal good.

9. The income effect of a price change

   a. is always positive.
   b. is always negative.
   c. may be positive or negative.
   d. is associated with a change in nominal income.
   e. is caused by changes in consumer tastes.

10. market demand curve can be derived by adding all the individual demand curves
   a. vertically.
   b. horizontally.
   c. in parallel.
   d. Any of the above as long as it is consistent.

11. If leisure is an inferior good, the individual's supply curve for labor is

    a. backward bending.
    b. completely inelastic.
    c. upward sloping.
    d. perfectly elastic.
    e. not necessarily any of the above.

12. Price elasticity of demand is defined to be

    a. the change in quantity demanded resulting from a 1 cent change in price.
    b. the percentage change in price resulting from a 1 unit change in quantity demanded.
    c. the percentage change in quantity demanded resulting from a 1 percent change in price.
    d. the maximum amount consumers will pay for 1 percent more of a good.
    e. the change in the price of a good divided by the resulting change in its quantity demanded.

13. Price elasticity at a given price is *not* affected by

    a. the price of complements.
    b. the price of substitutes.
    c. the consumer's income.
    d. a change in tastes.
    e. a change in supply.

14. If the demand for gasoline is relatively but not completely price inelastic, then it follows that

    a. people would be willing to pay any price to drive.
    b. a decrease in the price of gasoline would increase the supply of gasoline.
    c. a decrease in the price of gasoline would reduce the total amount spent on gasoline.
    d. gasoline consumption could not be cut without rationing.
    e. an increase in the price of gasoline would not cause the quantity demanded of gasoline to fall.

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15. Which is a true statement?

    a. Decreasing returns to scale and diminishing returns to production are two ways of stating the same thing.
    b. Increasing returns to scale is a short-run concept, and diminishing returns to production is a long-run concept.
    c. Constant returns to scale is a short-run concept, and decreasing returns to scale is a long-run concept.
    d. All the above are true.
    e. None of the above is true

16. For a firm operating in a perfect market, its short-run supply is identical with the rising arm of

    a. its marginal-cost curve.
    b. its average-fixed-cost curve.
    c. its average-total-cost curve.
    d. none of the above.

17. The term <u>increasing cost industry</u> is used to describe

    a. a firm with a rising average cost curve.
    b. an industry subject to decreasing returns to scale.
    c. an industry with a rising marginal cost curve.
    d. an industry in which the prices of one or more inputs are bid up as output expands

18. If both supply and demand for a good increase at the same time, which of the following must also increase?

    a. the equilibrium price
    b. the use of substitutes
    c. the equilibrium quantity
    d. all of the above

19. Suppose a vaccine for the common cold is discovered. Although the government begins producing the vaccine in as large a volume as possible, there is not enough vaccine available to meet demand. Consequently, the government must also set up an allocation scheme to control the vaccine's distribution. Which of the following is true about the price of the vaccine?

    a. It was above equilibrium.
    b. It was below equilibrium.
    c. It was at equilibrium.
    d. Nothing can be determined from the information given.

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20. With respect to price elasticity, it is true that

a. monopoly market demand need not be less elastic than market demand in a competitive industry.
b. monopoly firms face less elastic demand than do competitive firms.
c. a monopolist should not produce where demand is inelastic.
d. all the above are correct statements.

21. Which of the following is *not* true?

a. A monopolist typically seeks to maximize profits.
b. A monopolist sets price as high as possible.
c. A monopolist may engage in advertising.
d. Monopolists price on the elastic portion of their demand curves.
e. Profits are not guaranteed even if the firm is a monopolist

22. Price discrimination is

a. illegal.
b. a technique that can improve the firm's revenue and profit performance.
c. immoral in most cases.
d. impossible if consumers have perfect information.
e. difficult to administer.

23. The key feature of oligopoly is

a. excess capacity.
b. high profitability.
c. product differentiation.
d. interdependence of firms.
e. the impersonal nature of the market.

24. The basic behavioral assumption of the Cournot model is

a. each duopolist assumes that his or her rival's price is invariant with respect to his or her own price.
b. each duopolist assumes that his or her rivals' output is invariant with respect to his or her own output.
c. duopolists recognize their mutual interdependence and agree to act in unison.
d. each duopolist assumes that if he or she lowers the price, his or her rivals will do the same but that if he or she raises the price, his or her rivals may not follow suit.
e. none of the above.

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25. A firm operating in a perfect market maximizes its profit by adjusting
    a. its output price until it exceeds average total cost as much as possible.
    b. its output price until it exceeds marginal cost as much as possible.
    c. its output until its marginal cost equals output price.
    d. its output until its average total cost is minimized.

26. A monopsony is

    a. the sole supplier of an input.
    b. the sole supplier of an output.
    c. the sole buyer of some type of input.
    d. a unionized industry.

27. The firm under monopolistic competition is likely to produce less and set a higher price than under perfect competition because
    a. the firm faces decreasing returns to scale.
    b. the firm faces increasing costs.
    c. the firm must incur selling expenses, including advertising.
    d. the firm operates where marginal revenue equals marginal cost.
    e. the firm faces a downward sloping demand curve.

28. Suppose that an excise tax is imposed on the monopolist's product. If the monopolist's marginal cost is horizontal in the relevant range, which of the following statements must be true?

    a. The price will increase by an amount less than the tax.
    b. The price will increase by an amount equal to the tax.
    c. The price will increase by an amount greater than the tax.
    d. The price may either increase or decrease.
    e. An excise tax will have no effect on the price-output decision of a monopolist.

29. Because a monopoly hires workers up to the point where their marginal revenue product equals the wage rate, the monopoly will

    a. pay less than the going wage rate.
    b. pay a wage equal to the value of the marginal product of labor.
    c. pay less than the value of the marginal product of labor.
    d. pay workers what they are worth to society.

30. If a graph of a perfectly competitive firm shows that the MR=MC point occurs where MR is above AVC but below ATC:

a. The firm is still earning positive profit, so long as variable costs are covered.
b. The firm is covering explicit, but not implicit, costs.
c. The firm can cover all of fixed costs but only a portion of variable costs.
d. The firm is earning negative profit, and will shut down rather than produce that level of output.
e. The firm is earning negative profit, but will continue to produce where MR=MC in the short run.

31. An isocost line reveals the:

a. Costs of inputs needed to produce along an isoquant.
b. Costs of inputs needed to produce along an expansion path.
c. Costs necessary to purchase a plant of minimum efficient scale.
d. Output combinations that can be produced with a given outlay of funds.
e. Input combinations that can be purchased with a given outlay of funds.

32. Producer surplus in a perfectly competitive industry is:

a. The difference between profit at the profit-maximizing output and profit at the profit-minimizing output.
b. The difference between total revenue and total cost.
c. The difference between total revenue and variable cost.
d. The difference between total revenue and fixed cost.
e. The same thing as total revenue

33. In an unregulated, competitive market, producer surplus exists because some:

a. Consumers are willing to pay more than the equilibrium price.
b. Consumers are willing to purchase, but only at prices below equilibrium price.
c. Producers are willing to sell at less than the equilibrium price.
d. Producers are willing to sell at higher than the equilibrium price.
e. None of the above.

34. Import tariffs generally result in:

a. higher domestic prices.
b. less consumer surplus.
c. More producer surplus for domestic producers.
d. a deadweight loss.
e. all of these.

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35. When the government imposes a specific tax per unit on a product, changes in consumer surplus are ______________ and changes in producer surplus are ______________:
    a. negative; negative
    b. negative; positive
    c. positive; positive
    d. positive; negative
    e. all of the above

36. A supply curve for a good shows the
    a. maximum quantities sellers are willing to offer for sale at alternative prices.
    b. maximum quantities that can be produced at alternative prices.
    c. quantities sellers will offer as their production costs change.
    d. quantities sellers can legally supply.

37. Being a price taker in a market means that the seller
    a. charges each consumer the maximum that she will be able to pay for the product.
    b. has no choice but to charge the equilibrium price that results from the market supply and demand curves.
    c. takes her price from her average total cost curve.
    d. sells her products at different prices to different customers.

38. In perfect competition, when economic profits exist in the short run, they are very tenuous because
    a. costs will inevitably increase and eliminate profit.
    b. price will fall because market supply will increase.
    c. firms are driven to increase output in the short run to the point where average total cost will equal price.
    d. firms are driven in the short run to reduce output until average total cost equals price.

39. When a profit-maximizing firm is at its short-run optimum point,
    a. the average cost of the product is at its lowest possible point whether a profit is being made or not.
    b. the firm will be shut down if its price is less than the average fixed cost.
    c. the profit per unit of output will be at its maximum possible level.
    d. all the above will be true.
    e. none of the above will be true.

40. The short-run supply curve for a competitive industry is derived by

a. horizontally summing the marginal cost curves for each firm in the industry.
b. horizontally summing the average variable cost curves for each firm in the industry.
c. vertically summing the marginal cost curves for each firm in the industry.
d. none of the above.

Question 2

a) Tempilo has E500 to spend on clothing, C, and food, F, where C costs E100 per unit and F costs E50 per unit. Putting F on the horizontal axis, draw Tempilo's budget line and an indifference curve such that she buys 2F. Assuming Andzile has the same income and faces the same prices, but buys 6F, draw his indifference curve on the same diagram. In equilibrium, what is the MRS of F for C for Tempilo? And for Andzile? (**10 points**)

b) Madoda consumes goods X and Y and spends E250 per week. The per unit price of X = E30; the per unit price of Y = E20. Madoda's utility function can be written as U(X,Y) = 0.5XY. This implies that the $MU_X = 0.5Y$, and the $MU_Y = 0.5X$.

- Write the expression for Madoda's marginal rate of substitution between X and Y. (**5 point**):
- Write the expression for the budget line. (**5 point**):
- Determine the values of X and Y that will maximize utility. (**10 points**)

Question 3

Jimmy produces milk using milking machines (read: cows) (K) and labor (milkmen) (L). He has access to the technology given by

y = F(K;L) = $K^{1/3}L^{1/3}$

The price of a litre of milk is p = E1; the price of one machine (cow) is w_k =E2 and the (milkmen) wage rate is w_l =E1

a) Does this function exhibit increasing, constant or decreasing returns to scale? **(5 points)**

b) Write down the profit function (a function that depends on K and L) **(10 points)**

c) Find the optimal input levels, the output level and the maximal profit. **(15 points)**

Question 4

a) Give four examples of market interactions with externalities: two positive and two negative ones. **(10 points)**

b) In each of your examples is the outcome Pareto efficient or not? Why or why not ? (You can answer this question assuming that market is not regulated) **(10 points)**

c) In each case explain how possibly we could change incentives of the agents so that they are closer to socially optimal outcome? **(10 points)**