AFRICA UNIVERSITY
(A United Methodist-Related Institution)

"Investing in Africa's Future"
COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

NMEC 306: ADVANCED MICROECONOMIC THEORY

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER 2022

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES

1. Answer **all** questions in section A, B, and C.
2. The marks allocated to **each** question are shown at the end of the question.
3. Candidates are allowed to use a non-programmable calculator.
4. Start **each** question on a new page in your answer booklet.

SECTION A

Questions 1 to 20 of the examination question paper are MULTIPLE-CHOICE questions. In each question select the most correct option. Each question carries 2 marks.

1. Marginal revenue is best interpreted as the:

   A. addition to total revenue from the next unit produced and sold.
   B. increment to average revenue from the next unit produced and sold.
   C. smallest increment of revenue that can be gained by producing and selling a unit.

2. When the price of a good decreases its quantity purchased also decreases, it is *most likely* that:

   A. both the substitution effect and income effect lead to a decrease in the quantity purchased.
   B. the substitution effect leads to a decrease in the quantity purchased, while the income effect leads to an increase in the quantity purchased.
   C. the income effect leads to a decrease in the quantity purchased, the substitution effect leads to an increase in the quantity purchased.

3. Monopolists have considerable pricing power and may charge consumers in different ways. Exporters charging higher prices for denim jeans in the international market compared to local markets is an example of:

   A. First - degree price discrimination.
   B. Second - degree price discrimination.
   C. Third - degree price discrimination.

4. In which of the following industry structures are market competitors least likely to use advertising as a tool of differentiation?

   A. Perfect competition.
   B. Monopolistic competition.
   C. Monopoly.

5. Consider an agreement between France and Germany that will restrict wine production so that maximum economic profit can be realized. The possible outcomes of the agreement arc presented in the table below.

	Germany complies	Germany defaults
France complies	France gets $8 billion Germany gets $billion	France gets $2 billion Germany gets $10 billion
France defaults	France gets $10 billion Germany gets $2 billion	France gets $4 billion Germany gets $4 billion

   Based on the concept of a Nash equilibrium, the most likely strategy followed by the two countries with respect to whether they comply with or default on the agreement will be:

   A. both countries will default.

B. both countries will comply.
C. one country will default and the other will comply.

6. Elasticity measures:

A. the slope of a demand curve.
B. the inverse of the slope of a demand curve.
C. the percentage change in one variable in response to a 1% increase in another variable.

7. The price elasticity of demand for a demand curve that has a zero slope is

A. one.
B. negative but approaches zero as consumption increases.
C. infinite.

8. A vertical demand curve is:
A. completely inelastic.
B. infinitely elastic.
C. highly (but not infinitely) elastic.

9. If two goods are substitutes, the cross-price elasticity of demand must be:

A. negative.
B. positive.
C. zero.

10. As the price of good X increases from R5.00 to R8.00, quantity demanded falls from 100 to 80. Based upon this information, we can conclude that the demand for X is:

A. elastic.
B. inelastic.
C. unit inelastic.

11. Refer to the following two statements in answering this question:
I. All Giffen goods are inferior goods.
II. All inferior goods are Giffen goods.

A. I and II are true.
B. I is true, and II is false.
C. I is false, and II is true.

12. The change in the quantity demanded of a good resulting from a change in relative price with the level of satisfaction held constant is called the __________ effect.

A. Giffen
B. income
C. substitution

13. For an inferior good, the income and substitution effects

A. work together.
B. work against each other.
C. can work together or in opposition to each other depending upon their relative magnitudes.

14. The substitution effect of a price change for product X is the change in consumption of X associated with a change in:

A. the price of X, with the level of utility held constant.
B. the price of X, with the level of real income not considered.
C. the price of X, with the prices of other goods changing by the same percentage as that for product X.

15. Refer to the following two statements to answer this question:
I. The price elasticity of demand is constant along the entire length of a linear demand curve.
II. The price elasticity of demand is the special name that economists give to the slope of a demand curve.

A. I is true, and II is false.
B. I is false, and II is true.
C. I and II are false.

16. Which of following is a key assumption of a perfectly competitive market?

A. Firms can influence market price.
B. Commodities have few sellers.
C. It is difficult for new sellers to enter the market.
D. None of the above.

17. An electric power company uses block pricing for electricity sales. Block pricing is an example of

A. first-degree price discrimination.
B. second-degree price discrimination.
C. third-degree price discrimination.
D. block pricing is not a type of price discrimination.

18. Second-degree price discrimination is the practice of charging

A. the reservation price to each customer.
B. different prices for different quantity blocks of the same good or service.
C. different groups of customers different prices for the same products.
D. each customer the maximum price that he or she is willing to pay.

19. A firm is charging a different price for each unit purchased by a consumer. This is called

A. first-degree price discrimination.
B. second-degree price discrimination.
C. third-degree price discrimination.
D. fourth-degree price discrimination.

20. Collusion is less likely in a market when:

A. the product is homogeneous.
B. companies have similar market shares.
C. the cost structures of companies are similar.

(40 marks)

SECTION B

Answer True/False (T/F) (Each question carries 2 marks)

1. Producer surplus is the excess of the market price above the opportunity cost of production; that is, total revenue minus the total variable cost of producing those units.
2. In a general equilibrium analysis, relationships between the quantity demanded of the good and factors that may influence demand are taken into account.
3. An equilibrium is termed stable when there arc forces that move price and quantity back towards equilibrium values when they deviate from those values.
4. A price floor is a minimum price that a buyer can offer for a good, service, or resource.
5. A price ceiling is an upper limit on the price which a seller can charge.
6. A Giffen good is an inferior good for which the negative income effect of a price decrease outweighs the positive substitution effect, so that a decrease (increase) in the good's price has a net result of decreasing (increasing) the quantity consumed.
7. A Veblen good is also one for which an increase (decrease) in price results in an increase (decrease) in the quantity consumed.
8. Utility theory is consistent with the existence of a Giffen good, one for which a price increase results in an increase in consumption.
9. The substitution effect of a price decrease is always positive, but the income effect can be either positive or negative. Consumption of a good will decrease when the price of that good decreases only if the income effect is both negative and greater than the substitution effect.
10. Marginal revenue is the increase in total revenue from selling one more unit of a good or service. For a firm in a perfectly competitive market, all units are sold at the same price regardless of quantity, so that average revenue and marginal revenue arc both equal to the market price.
11. Firms operating under imperfect competition face downward-sloping demand curves. Unlike firms operating under perfect competition, firms in imperfect competition must decide what price to charge for their product.
12. Firms that face downward-sloping demand curves are referred to as price searchers.
13. A Nash equilibrium is reached when the choices of all firms are such that there is no other choice that makes any firm better off (increases profits or decreases losses).

14. The Cournot model considers an oligopoly with only two firms competing, that is, a duopoly, and both have identical and constant marginal costs of production.
15. Price discrimination is the practice of charging different consumers different prices for the same product or service.
16. When price decreases, the substitution effect will always lead to an increase in the quantity purchased.
17. The quantity purchased of a good will decrease when price decreases only if the income effect is both negative and greater than the substitution effect.
18. Third degree price discrimination occurs when customers are segregated by demographics. Dividing the customers into two groups, local and international; and charging two different prices is an example of third degree price discrimination.
19. To sell a greater quantity, price searcher firms must increase the price.
20. Under imperfect competition, average revenue and marginal revenue will decline as quantity sold decreases.

(40 marks)

SECTION C

QUESTION ONE

(a) Describe the characteristics of perfect competition, monopolistic competition, oligopoly, and pure monopoly (10 marks).

(b) Discuss the concept of equilibrium (partial and general), and mechanisms by which markets achieve equilibrium (10 marks).

END OF EXAMINATION