NATIONAL UNIVERSITY OF LESOTHO

BA SUPPLEMENTAY EXAMINATIONS

EC 1511 – PRINCIPLES OF MICROECONOMICS

AUGUST 2023   **100 MARKS**   **3 HOURS**

INSTRUCTIONS

1. Section A **is compulsory**

2. Answer **any two** questions from Section B

3. Show all your workings and interpret your answers where necessary

SECTION A

1. The demand curve of an individual firm in a perfectly competitive market structure is a:

a. Negatively sloped line

b. Horizontal line

c. Positively sloped line

d. Vertical line

2. The market demand curve in a perfectly competitive industry is a:

a) Negatively sloped line

b) Horizontal line

c) Positively sloped line

d) Vertical line

3. If a firm in a perfectly competitive industry operates where *MR* equal *MC*, this firm is:

a. Making maximum profits

b. Making minimum losses

c. Maximising profits or minimising losses

d. Operating at the break-even point

4. The supply curve of a firm in a perfectly competitive industry is equal to the:

a. Positively sloped part of the *MC* curve

b. *MC* curve equal to and above the minimum turning point of the *ATC* curve

c. *MC* curve equal to and above the minimum turning point of the *AVC* curve

d. *MC* curve between the minimum turning points of the *AVC* and *ATC* curves

5. A monopoly is a market structure where there is:

a. Only one seller

b. Only one buyer

c. Only one buyer and one seller

d. No room for more than one firm

6. A firm operates as a natural monopoly. If the government intervenes and another firm enters the industry:

a. Prices in the market will decrease

b. Prices in the market will increase

c. Sales in the market will increase

d. Sales in the market will remain the same

7. Total fixed cost (TFC):

a. Is a horizontal line

b. Is a negatively sloped line

c. Is a positively sloped line

d. Initially decreases, but then increases

8. Average fixed cost (AFC):

a. Is a horizontal line

b. Is a negatively sloped line

c. Is a positively sloped line

d. Initially decreases, but then increases

9. Market failure in the form of externalities arises when

a. production costs are included in the prices of goods.

b. not all costs and benefits are included in the prices of goods.

c. the benefits exceed the costs of consuming goods.

d. the market fails to achieve equilibrium.

10. The social cost of a good is

a. its benefit to the people who buy and consume it.

b. its total benefit to everyone in society.

c. its cost to everyone in the society that occurs in addition to the private costs.

d. the cost paid by the firm that produces and sells it.

11. The private benefit of consuming a good is

    a.   its benefit to the people who buy and consume it.

    b. its total benefit to everyone in the society.

    c. its cost to everyone in the society.

    d. the cost paid by the firm that produces and sells it.

12. When a person drives a car that pollutes the air the

  a. private cost of consuming the car's services exceeds the social cost.

  b. private benefit of consuming the car's services exceeds the social benefit.

  c. social cost of consuming the car's services exceeds the private cost.

  d. social benefit of consuming the car's services exceeds the private benefits

13. If a perfectly competitive industry is not forced to take account of a negative externality it creates, it will produce where

    a. the marginal cost of production equals the marginal private benefit.

    b. the marginal cost of production equals the marginal social benefit.

    c. the marginal social cost of production equals the marginal social benefit.

    d. equals marginal social benefit.

14. Because there are positive externalities from higher education,

    a. private markets would provide too little of it.

    b. private markets would provide too much of it.

    c. the government should impose a tax on university students.

    d. the government should impose a tax on students' families.

15. Which of the following would be the best example of a public good?

    a. chocolate bar

    b. a painting by Monare

    c. a beautiful sunset

    d. a crowded beach

16. To achieve the optimal provision of public goods the

a. market should be allowed to find its equilibrium without government intervention.

b. government must limit the provision of the goods.

c. government must tax producers of these goods.

d. government must either provide the goods or subsidize their production.

17. Imagine a 200 hectares park with picnic benches, trees, and a pond. Suppose it is publicly owned, and people are invited to enjoy its beauty. Of course, when the weather is nice it is difficult to find parking, and the rubbish bins overflow with food wrappers on summer afternoons. Otherwise, it is a great place. The park is a common good because

a. when rubbish bins overflow, a negative externality becomes a positive externality.

b. it is not fenced to control access.

c. if too many people use it, one person's use can prevent others from using it.

d. you have to drive to get there and the car is a private good.

18. Public goods are

a. rival and excludable.

b. rival but non-excludable.

c. non-rival but excludable.

d. non-rival and non-excludable

19. Private goods are

a. rival and excludable.

b. rival but non-excludable.

c. non-rival but excludable.

d. non-rival and non-excludable.

20. Who among the following is a free rider?

a. Ronnie, who steals chocolate from the store where he works.

b. Ingrid, who regularly uses the local public library in the town in which she lives.

c. Max, who drives 20,000 kilometres a year on public roads, while he pays no more in taxes than Hans, who only drives 1,000 kilometres.

d. George, who watches many public television programmes, but he has not bought a TV licence.

21. People have little incentive to produce a public good because

a. the social benefit is less than the private benefit.

b. the social benefit is less than the social cost.

c. there is a free rider problem.

d. there is a tragedy of the commons.

22. A private good is:

a. Provided only by public sector at a loss

b. Provided only by private sector at a loss

c. Can be consumed by many people simultaneously

d. Cannot be consumed by many people simultaneously

23. The chief characteristic of market economic system is:

a. Producer sovereignty

b. Barter

c. Centralized decision-making

d. Consumer sovereignty

24. An increase in the price of a butter causes the following change in the market for margarine:

a. Increase in the demand for margarine

b. Decrease in the supply of margarine

c. A slide along the demand curve to the left

d. A slide along the supply curve to the left

25. A slide or movement along a demand curve can be caused by a change in:

a. Income

b. Tastes

c. Population size

d. The price of the product

26. If the current price of bicycles is below the equilibrium price, then:

a. The price of bicycles is like to fall in the future

b. There is shortage of bicycles

c. The quantity of bicycles supplied is greater than the quantity of bicycles demanded

d. There is surplus of bicycles

27. Straight line demand curves have price elasticities of demand that are:

a. Equal to zero at all points along the line

b. Equal to one at all points along the line

c. Decreasing absolute value as price increases

d. Constant only when the demand curve is horizontal or vertical

28. The price of avocados rises from M1.50 to M3.00, and the quantity demanded decreasesfrom 1000 to 900 units a week. The price elasticity of Demand is:

a. 15

b. 10

c) 0.10

d) 1.5

29. The price of a soft drink falls from M8 to M6, ceteris paribus, and sales rise from 100 to 150 units a day. The average price elasticity of demand is:

a. 1.4

b. 2

c. 0.50

d. 0.04

30. The horizontal demand curve has a price elasticity of demand equal to:

a. 0

b. Infinity

c. 1

d. 1000

31. The income elasticity of demand for cars is +2.5. Therefore, a 20% increase in consumer income, ceteris paribus, will:

a. Decrease demand for cars by 50%

b. Increase demand for cars by 50%

c. Increase demand for cars by 8%

d. Decrease demand for cars by 5%

32. The price elasticity of demand for butter is 0.5. The cross-price elasticity of demand for margarine, with respect to butter is +1. Therefore, a 20% increase in the price of butter, ceteris paribus, will cause the quantity demanded of butter to:

a. Fall by 10% and the demand for margarine to increase by 20%

b. Fall by 10% and the demand for margarine to decrease by 20%

c. Rise by 10% and the demand for margarine to increase by 20%

d. Rise by 10% and the demand for margarine to decrease by 20%

33. Volatile prices are most likely to occur in markets where:

a. Both demand and supply are price elastic

b. Both demand and supply are price inelastic

c. Supply is price elastic and demand is price inelastic

d. Supply is price inelastic and demand is price elastic

34. The amount you pay less for a product that you are willing to pay is known as:

a. Consumer surplus

b. Producer surplus

c. Profit

d. Loss

35. A consumer maximizes his utility of consuming product X and Y where:

a. $D_x = S_y$

b. $MU_x = MC_y$

c. $MU_x = MU_y$

d. $(MU_x/P_x) = (MU_y/P_y)$

36. If the income of the consumer decreases, his budget line:

a. Shifts to the right

b. Shifts to the left

c. Stays unchanged

d. Tilts to the left

37. When the price of a product increases, you will always buy less of that product as a result of the:

a. Income effect

b. Substitution effect

c. Income-consumption effect

d. Price-consumption effect

38. The next best alternative that could be produced with a given number of resources:

a. Economic cost

b. Opportunity cost

c. Explicit cost

d. Total cost

39. The curve that represents the maximum amount of two goods that can be produced with agiven number of resources and the current state of technology is the:

a. Production possibility curve

b. Total production curve

c. Isoquant

d. Budget line

40. The marginal product curve intersects the average product curve at the:

a. Minimum value of the MP curve

b. Maximum value of the MP curve

c. Minimum value of the AP curve

d. Maximum value of the AP curve

41. In relation to the origin, an isoquant is:

a. Convex

b. Concave

c. Parallel

d. Tangential

42. The factors of production that are used in the production process are doubled and the output increases by 30 percent. This is known as:

a. Increasing returns to scale

b. Decreasing returns to scale

c. Constant returns to scale

d. Decreasing marginal product

**43. At the point where the isocost is tangential to the isoquant, production is:**

a. Only technically efficient

b. Only economically efficient

c. Technically and economically efficient

d. Not technically or economically efficient

44. In indifference curve analysis the assumption of transitivity states that the consumer:

  a. is able to place all combinations of goods and services in some order of preference.

  b. is consistent. (If A is preferred to B, and B to C, then C cannot be preferred to A.)

  c. will always prefer more of a good to less.

  d. will always act hyper-rationally.

Questions **45 to 47** are based on Figure 4-10 below:

Figure 4-10
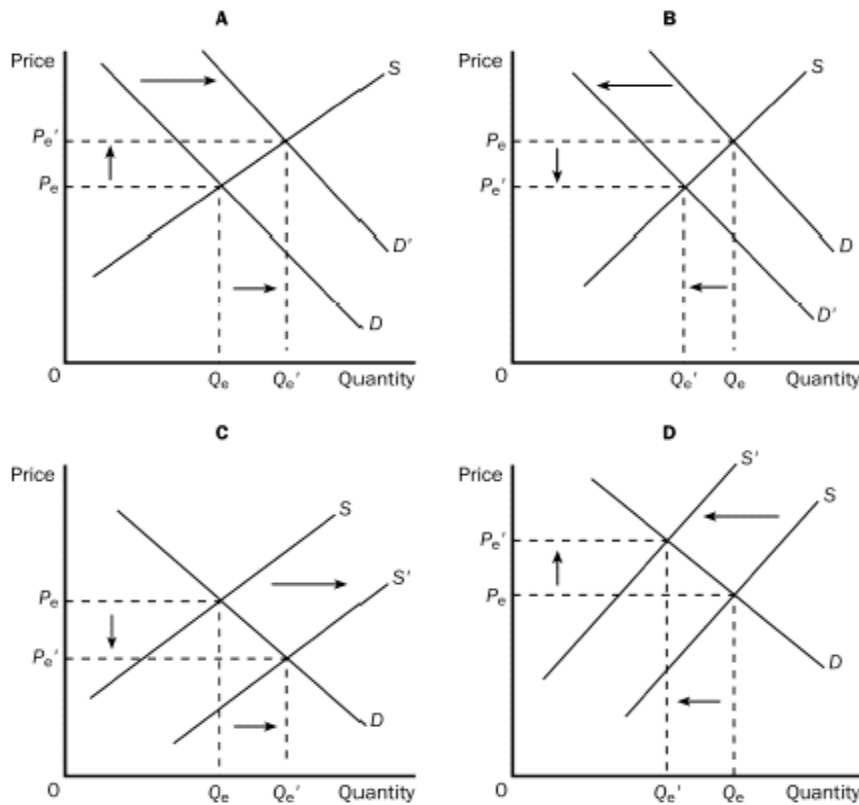
45. Which of the four graphs represents the market for wheat after a major drought hits the wheat-growing southern district, Mafeteng?

   a. A

   b. B

   c. C

   d. D

46. Which of the four graphs represents the market for winter coats as we progress from winter to spring?

   a. A

   b. B

   c. C

   d. D

47. Graph A shows which of the following?

   a. an increase in demand and an increase in quantity supplied

   b. an increase in demand and an increase in supply

   c. an increase in quantity demanded and an increase in quantity supplied

   d. an increase in supply and an increase in quantity demanded

48. Fahida Electronics produces either MP3 players or cell phones. As the result of a decrease in the price of cell phones, the company produces more MP3 players and fewer cell phones. An economist would explain this by saying:

   a. The supply of cell phones increased and the supply of MP3 players decreased.

   b. There has been an increase in the quantity supplied of cell phones and a decrease in the quantity supplied of MP3 players.

   c. There has been a decrease in the quantity supplied of cell phones and an increase in the supply of MP3 players.

   d. The supply of cell phones increased and the quantity supplied of MP3 players decreased.

49. The price elasticity of demand for bottled water in Maseru is 2, and the price elasticity of demand for bottled water in Maputsoe is 0.5. In other words, demand in Maseru is _____ and demand in Maputsoe is _____.

   a. Elastic; inelastic

   b. Inelastic; elastic

   c. Elastic; unit elastic

   d. Inelastic; unit inelastic

50. Which of the following demonstrates an act of production, as economists use the term?

   a. A worker places money in a savings account.

   b. A local radio station presenter performs at the NUL graduation.

   c. An individual buys company shares.

   d. All of the above.

SECTION B

QUESTION 1

The table below shows the average cost schedule of a firm that produces caps. Caps can be sold at M10.00 each.

Output (Q)	Average cost (AC) in Maloti	Price (P) in Maloti
70	6.50	10.00
80	6.75	10.00
90	7.00	10.00
100	7.30	10.00
110	8.00	10.00

For each level of output calculate **[Present your answer in a form of a table]**
  (a) Total cost (TC)   **[5]**
  (b) Total Revenue (TR)   **[5]**
  (c) Profit   **[5]**
  (d) Marginal cost (MC)   **[5]**
  (e) Marginal Revenue (MR)   **[5]**

QUESTION 2

(a) Saudi Arabia (responsible for 25% of the world's crude oil output) leads an OPEC decision to reduce supply by 20%. Use supply and demand diagrams to explain the process by which the price of oil moves from its original to its final equilibrium.   **[5]**

(b) 100,000 Basotho's mine workers lost their jobs in South Africa and all moved to work in Lesotho mining companies. Use the supply and demand diagram to explain the effect of this movement on the Lesotho market for labour.   **[5]**

(c) Assume that the price elasticity of demand for cigarettes is 0.4. A packet of cigarettes costs M10. If the government wants to reduce smoking by 20%, by how much should it increase the price?   **[5]**

(d) The cross price elasticity of demand for train travel, with respect to change in the price of bus travel, is +1.56. Explain the relationship that exists between these two forms of transport and interpret the meaning of +1.56.   **[5]**

(e) With the aid of a diagram, explain why indifference curves cannot intersect.   **[5]**

QUESTION 3

(a) The following table shows the demand schedule for bread from "House of Bread":

| Price per unit [in Maloti]	Quantity demanded
M120.00	600
M100.00	650
M80.00	700

    (i) Calculate the price elasticity of demand at each price. **[6]**
    (ii) Explain whether demand for bread is price elastic or inelastic. Support your answer by
    making reference to the answers obtained in (i) above. **[2]**

(b) Discuss two determinants of price elasticity of supply. **[3]**

(c) Suppose that the consumer's income is only spend on two commodities; Meat (M) and Rice (R).
    Suppose further that consumer's income is M48.00 and that prices of Meat and Rice are M8.00 and
    M12.00 per unit respectively:

    (i) Draw the consumer's budget line [BL] showing clearly all combinations of Meat and Rice
       that the consumer can afford. *[Hint: Plot Meat on the Y-axis and Rice on the X-axis]* **[4]**
    (ii) Compute the slope of the BL drawn in (i) above. **[2]**
    (iii) Show equilibrium graphically indicating clearly the units of Meat and Rice consumed at
        equilibrium. **[2]**

(d) Given the following graph:
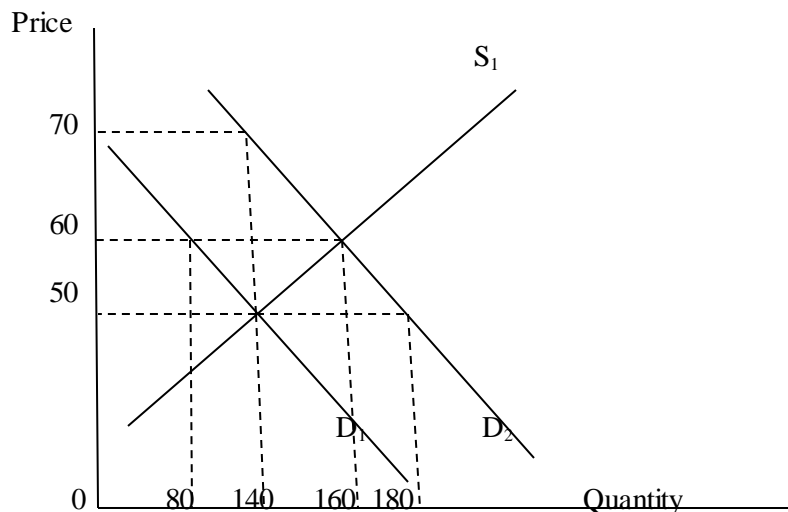
(i)   What is the equilibrium price and quantity when the demand is D_1? **[2]**
(ii)   What is the equilibrium price and quantity when the demand is D_2? **[2]**
(iii)   What will be excess demand when 140 bags of a commodity are produced? **[2]**