Damietta University – Faculty of Commerce
Department of Economics
1St Semester Final Exam 2024/ 2025

Damietta University

English Section
Contemporary Economic Issues
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Time: 120 Minutes

Model B

Level: Fourth year
Course Code: ECON401
Total Marks: 70
Total Pages: 3

Answer the following questions

Ahmed sells ancient papyrus and the market demand for his papyrus is $P = 18 - 3Q$, where P the price, Q is the quantity of sold papyrus per month. Ahmed has two strategies for selling his ancient papyrus; the first, he behaves as a monopolist and he can set a price and the total cost of selling each papyrus under such arrangement is $3, and he incurs a monthly fixed cost of $7.5.

The second strategy, he can behave as discriminator. In this case he hires a salesman who can well estimate a customer's WTP for a papyrus and he paid him $ 1.5 per each unit he sells. He incurs the same fixed cost.

Calculate Ahmed total profit if he acts as a monopolist and if he acts as discriminator.

The first strategy; Ahmed behaves as a monopolist

1. The quantity (Q) equals:
   - a. 2.5
   - b. 3
   - c. 3.5
   - d. 4

2. The price per unit is:
   - a. 9.5
   - b. 10
   - c. 10.5
   - d. 11

3. Total revenues for Ahmed as a monopolist are:
   - a. 24.75
   - b. 25.25
   - c. 25.75
   - d. 26.25

4. Total costs for Ahmed are:
   - a. 14.5
   - b. 15
   - c. 16
   - d. 16.25

5. Total profits for Ahmed as a monopolist are:
   - a. 10.25
   - b. 11.25
   - c. 9. 5
   - d. 9.25

The second strategy; Ahmed behaves as a discriminator

6. The quantity(Q) for a discriminator is:
   - a. 3
   - b. 3.5
   - c. 4
   - d. 4.5

7. The price per unit for a discriminator is:
   - a. as quantity
   - b. less quantity
   - c. varied
   - d. greater than quantity

8. Total revenues for Ahmed as a discriminator are:
   - a. 50.625
   - b. 52.250
   - c. 54.875
   - d. 56.625

9. Total costs for Ahmed as a discriminator are:
   - a. 25.25
   - b. 27.75
   - c. 26.25
   - d. 26.75

10. Total profits for Ahmed as a discriminator are:
    - a. 29.125
    - b. 28.625
    - c. 27.875
    - d. 22.875

Questions from 11 to 21

The demand for solar cells is given by: $P = 490 - Q$ where Q is the number of solar cells demanded if the price is P per cell. The total cost of the Clean Energy (a monopolist) is given by: $TC = 50 + 25Q + 0.25 Q^2$ where Q is the number of produced solar cells and put on the market by the company. Suppose the government could force Clean Energy to behave as if it was a perfect competitor, via regulation,

1- What is the social welfare when Clean Energy acts as a monopolist?
2- What is the social welfare when Clean Energy behaves as a competitor?
3- How much social welfare increases when Clean Energy moves from monopoly to perfect competition?

For answering the following questions, you must solve the problem in blank paper and match your answers with given results in MCQ questions.

Clean Energy firm acts as a monopolist:

11. The required quantity for profit maximization for a monopolist is:
    - a. 120
    - b. 156
    - c. 186
    - d. 198

12. The required price for profit maximization for a monopolist is:
    - a. 370
    - b. 304
    - c. 334
    - d. 292

13. Consumer surplus for a monopolistic market is:
a. 11160   b. 14508   c. 17298   d. 18414

14. Producer surplus for a monopolistic market is:
a. 36875   b. 39276   c. 46480   d. 43245

15. Social welfare for a monopolistic market is:
a. 60543   b. 53784   c. 57640   d. 55289

Clean Energy firm acts as a competitor:

16. The required quantity for profit maximization for a competitor is:
a. 272   b. 310   c. 248   d. 288

17. The required price for profit maximization for a competitor is:
a. 298   b. 240   c. 218   d. 180

18. Consumer surplus for a competitive market is:
a. 46870   b. 50200   c. 48050   d. 47980

19. Producer surplus for a competitor market is:
a. 24025   b. 31775   c. 26203   d. 28900

20. Social welfare for a competitive market is:
a. 66218   b. 72075   c. 76716   d. 80617

21. social welfare for competitive market increased by (Deadweight loss)
a. 8265   b. 10680   c. 9617   d. 11532

Questions from 22 to 27

Eyad has an apparel firm. He manufactures shirts and trousers that are cut from the same fabrics. Such products are jointly produced in equal quantities. Mangers face total cost function: $TC = 50 + Q + Q^2$. The demand curves for Eyad's two products are: $P_{Shirts} = 100 - 0.5 Q_{Shirts}$, $P_{Trousers} = 76 - Q_{Trousers}$, where P_{Shirts} and Q_{Shirts} are the price and quantity for shirts and $P_{Trousers}$ and $Q_{Trousers}$, are price and quantity for trousers. Eyad managers want to know how many units of shirts and trousers they should produce to maximize profit for his firm and how much this profit is? Bear in mind that the firm's total revenue is equal to the total revenues from its two products.

22. The joint quantity can Eyad produce from shirts and trousers
a. 42   b. 37   c. 35   d. 31

23. The price for shirts will be
a. 82.5   b. 85   c. 88.5   d. 92

24. The price for trousers will be
a. 37.5   b. 39   c. 40   d. 41

25. Total revenues Eyad earn
a. 3920   b. 4322.5   c. 4451.5   d. 4750

26. Total costs Eyad incur
a. 1460   b. 1390   c. 1310   d. 1250

27. Total profits could Eyad earn from producing both products jointly
a. 3012.5   b. 3061.5   c. 3290   d. 2670

Shade the Box A for the correct sentence and Box B for the wrong one

28. Last – pound rule: Pick the bundle of inputs where the last pound spent on one input gives more output as the last pound spent on any other input.

29. Since there are no fixed costs in the long run, fixed costs can't explain initial downward slope of the long run total cost curve.

30. If the production function has increasing returns to scale, doubling inputs lead to more than doubles output. So, AC rises with higher output.

31. The line that displays the cost of producing a given level of output depends on the price of labor & capital is called the isocost line.

32. The last pound rule states that cost is minimized if inputs are chosen so that the last pound spent on labor adds as few outputs as the last pound spent on capital.

33. Long run cost is lower than short run cost since a firm has less flexibility in the long run.

34. Economies of scale often arise because higher production levels allow specialization among workers.

35. Horizontal merger is a merger, between firms at different stages of production of a good whereas vertical merger is a merger between firms in the same industry.

36. Post-merger HHI between 1,000 and 1,800 means that these markets are moderately concentrated, while post-merger HHI above 1,800 indicates that these markets are not concentrated.

37. Two–part tariffs pricing strategy occurs when managers set prices so that consumers pay an entry fee and then a use fee for each unit of the product they consume.

38. Three conditions must be fulfilled for third–degree price discrimination; demand must be homogeneous, mangers must be able to identify and segregate(isolate) the different segments, and markets must be successfully sealed.

39. The optimal solution for third–degree price discrimination is $MR_1(Q_1) + MR_2(Q_2) = MC(Q_1) + MC(Q_2)$

40. A two-part tariffs is difficult for managers to implement than first–degree price discrimination because they charge individuals different prices for each unit of the good consumed.

41. We say that there are economies of scope if it is less expensive to produce goods jointly than separately.

42. Lowest–isocost rule: Pick the bundle of inputs in which the lowest isocost line covers the isoquant.

43. Tangency rule: Pick the bundle of inputs wherein the isoquant is tangent to the isocost line.

44. From among combinations of inputs, a firm wants to choose the particular bundle with lower cost of production, which is economically efficient combination of inputs.

Best Wishes

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