



**UNIVERSITI KUALA LUMPUR
BUSINESS SCHOOL**

**FINAL EXAMINATION
JULY 2024 SEMESTER**

COURSE CODE	: EEB20703
COURSE NAME	: MANAGERIAL ECONOMICS
PROGRAMME NAME	: BACHELOR OF BUSINESS ADMINISTRATION (HONS) IN INTERNATIONAL BUSINESS
DATE	: 24 SEPTEMBER 2024
TIME	: 2.00 PM – 5.00 PM
DURATION	: 3 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please **CAREFULLY** read the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of **TWO (2) Sections; Sections A and Section B.**
4. Answer **ALL** questions in **Sections A and Section B.**
5. Please write your answers on the OMR answer sheet and answer booklet provided.
6. All questions must be answered in **English** (any other language is not allowed).
7. This question paper must not be removed from the examination hall.

THERE ARE FIFTEEN (15) PAGES OF QUESTIONS, INCLUDING THIS PAGE.

SECTION A (Total: 30 marks)

INSTRUCTION: Answer ALL questions.

Please use the objective answer sheet provided.

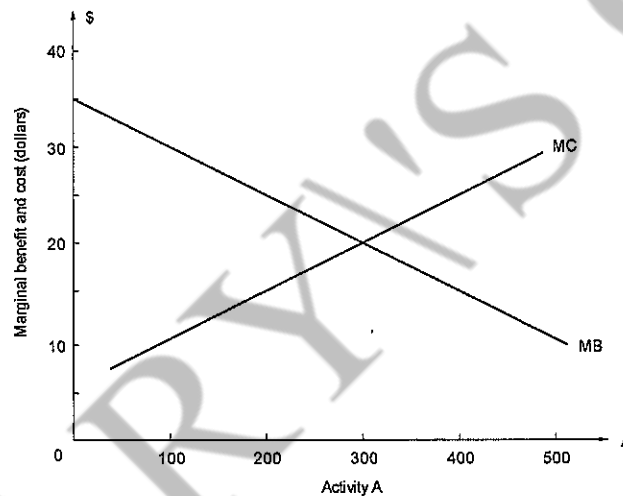
1. The principal-agent problem arises when _____.
 - A. the principal and the agent have different objectives and principal cannot monitor the behaviour of the agent
 - B. the principal and the agent have same interest, but the principal cannot enforce the contract with the agent
 - C. the principal cannot decide whether the firm should seek to maximize the expected future profits of the firm or maximize the price for which the firm can be sold
 - D. both A and B

2. Given the following general linear demand function:
$$Q_d = 680 - 9P + 0.006M - 4P_R$$
where M is income and P_R is the price of a related good, R . If income increases by \$1000, what will happen?
 - A. there will be a decrease of 6 units in quantity demanded, all else constant.
 - B. price of related good P_R will decrease by \$4, all else constant.
 - C. quantity demanded will increase by 0.006 units while price will decrease by \$9.
 - D. quantity demanded will increase by 6 units if it is a normal good, all else constant.

3. Economic profit is the difference between _____.
 - A. total revenue and the opportunity cost of all of the resources used in production
 - B. total revenue and the implicit costs of using owner-supplied resources
 - C. accounting profit and the opportunity cost of the market-supplied resources used by the firm
 - D. accounting profit and explicit costs

4. A firm is expected to earn economic profits of \$120,000 in the first year, \$140,000 in the second year, and \$100,000 in the third year. After the end of the third year, the firm will go out of business. If the firm can be sold today at the price of \$310,522.00, what is the value of the firm?
- A. \$49,478.00
 B. \$100,000.00
 C. \$310,522.00
 D. \$360,000.00
5. Refer to the figure 1 below which shows marginal benefits (MB) and marginal cost (MC) of activity A:

Figure 1: Marginal Benefit and Marginal Cost for Activity A



If the decision maker is choosing 300 units of activity A, _____.

- A. this level maximizes net benefits
 B. if the activity is increased by one unit, net benefits will increase by \$20
 C. if the activity is decreased by one unit, net benefits will decrease by \$20
 D. both b and c
6. An activity, A has the following marginal benefit and marginal cost functions:

$$MB = 100 - 5A$$

$$MC = 20 + 3A$$

What is the optimal level of A^* ?

- A. 40
 B. 30
 C. 20
 D. 10

Questions 7 and 8 are based on figure 2.

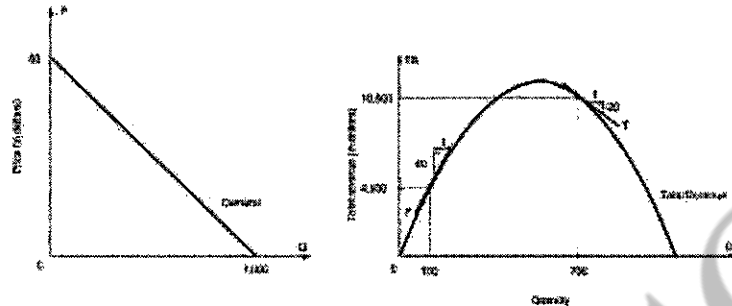
Figure 2. A Computer Printout

DEPENDENT VARIABLE: Y	R-SQUARE	F-RATIO	P-VALUE ON F	
OBSERVATIONS: 12	0.7542	13.80	0.0018	
VARIABLE	PARAMETER ESTIMATE	STANDARD ERROR	T-RATIO	P-VALUE
INTERCEPT	140.08	16.80	8.34	0.0001
X	-19.51	4.05	-4.82	0.0010
Z	1.01	0.20	5.05	0.0006

7. Choose the **CORRECT** regression.
- $R^2 = 0.7542$
 - $Y = 12 + 0.7542R\text{-SQUARE}$
 - $Y = 140 - 19.5X + Z$
 - $Y = 140(\text{Intercept}) - 19.5(X) + 1.0(Z)$
8. Which statement is **INCORRECT**?
- This is the output of a multiple linear regression.
 - All the t-ratios and F-ratio are statistically significant.
 - The variable Y explains 75% of the independent variables of X and Z.
 - A one unit increase in X will cause a decrease in Y by nearly 20 units.
9. Price elasticity of demand is defined as _____.
- quantity demanded divided by price
 - change in quantity demanded divided by change in price
 - the responsiveness of quantity demanded to a change in price
 - how quickly consumers switch to substitute products when price of a good changes.
10. Income elasticity refers to _____.
- the responsiveness of quantity purchased when income increases, all else constant.
 - a measure of the responsiveness of quantity supplied when income changes, holding all other variables constant.
 - how much income will change when the price of a product changes, ceteris paribus.
 - whether the income is affected by the nature of the product as in whether it is normal or inferior.

11. Figure 3 shows a linear demand curve and the associated total revenue curve. The price at which total revenue is maximised is \$_____.

Figure 3. Demand Curve and the Associated Total Revenue Curve



- A. 10
B. 15
C. 20
D. 25
12. Suppose that the local hospital is considering a plan in which publics who donate blood can get heart screening for RM75 instead of the usual RM150. If both revenues for heart screening and blood donations rise with this plan, which of the following is true?
- A. The demand for heart screening is price elastic.
B. The demand for heart screening is price inelastic.
C. The demand for blood donations is price elastic.
D. The demand for blood donations is price inelastic.
13. Consider two products A and B which are related. When price of good A increases from \$12 to \$14, quantity demanded of good B increases from 750 to 800. The cross price elasticity is _____.
- A. 0.42
B. 0.20
C. 2.0
D. 15.38
14. A production function measures the relation between _____.
- A. input prices and output prices
B. the quantity of inputs and the quantity of output
C. input prices and the quantity of output
D. the quantity of inputs and input prices

Refer to figure 4 and answer question 15 and 16.

Figure 4. Total Output from Various Combinations of Labour and Capital

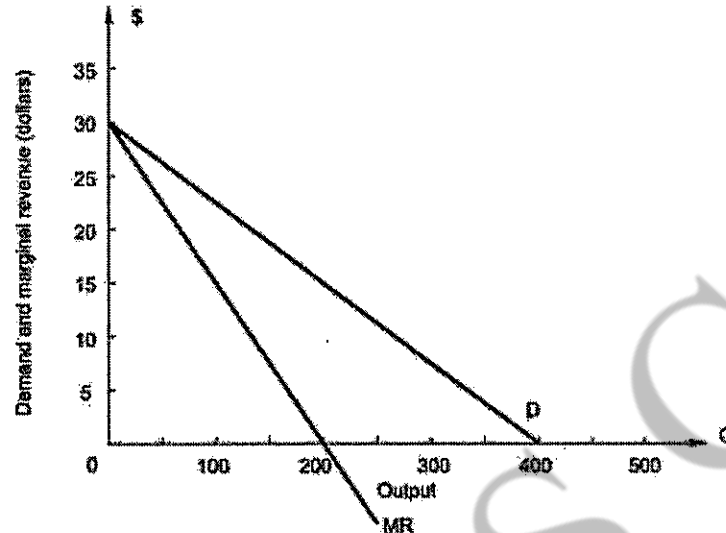
		Units of Capital		
		1	2	3
Units of Labour	1	80	100	120
	2	180	220	260
	3	270	330	390
	4	340	420	500
	5	390	490	590
	6	410	530	650

15. If labour is fixed at 5 units, how much does the second unit of capital add to total output?
- A. 490
B. 390
C. 50
D. 100
16. If capital is fixed at two units, what is the marginal product of the fourth unit of labour?
- A. 60
B. 80
C. 90
D. 100
17. A firm produces 4,000 units of output using 500 workers. Marginal cost is \$10, the wage rate is \$160, and total fixed cost is \$100,000. When output is 4,000 units, _____.
- A. average variable cost is decreasing
B. average variable cost is increasing
C. average total cost is increasing.
D. average total cost is constant.
18. The marginal rate of technical substitution is _____.
- A. the rate at which the firm can substitute labor for capital while holding total cost constant
B. the rate at which the firm can substitute labor for capital while holding output constant
C. the slope of the isocost curve
D. the slope where two isoquants cross each other

19. Which of the following is NOT a characteristic of long-run equilibrium for a perfectly competitive firm?
- A. Price is greater than long-run average cost.
 - B. Price is equal to long-run marginal cost.
 - C. Economic profit is zero.
 - D. The firm produces the output level at which long-run average cost is at its minimum.
20. For a price-taking firm, marginal revenue _____.
- A. is the addition to total revenue from producing one more unit of output.
 - B. decreases as the firm produces more output.
 - C. is equal to price at any level of output.
 - D. both a and c
21. Which of the following is a characteristic of a monopoly market?
- A. one firm is the only supplier of a product for which there are no close substitutes
 - B. entry into the market is blocked
 - C. the firm can influence market price
 - D. all of the above
22. A firm with market power will maximize profit by hiring the amount of an input at which the _____.
- A. last unit of input hired adds the same amount to total revenue as to total cost.
 - B. additional revenue from the last unit of the input hired exceeds the additional cost of the last unit by the largest amount.
 - C. last unit of the input hired adds the same amount to total output as to total cost.
 - D. additional output from the last unit of the input hired exceeds the additional cost of the last unit by the largest amount.

23. Refer to figure 5 which shows demand and marginal revenue for a monopoly.

Figure 5: Demand and Marginal Revenue for a Monopoly

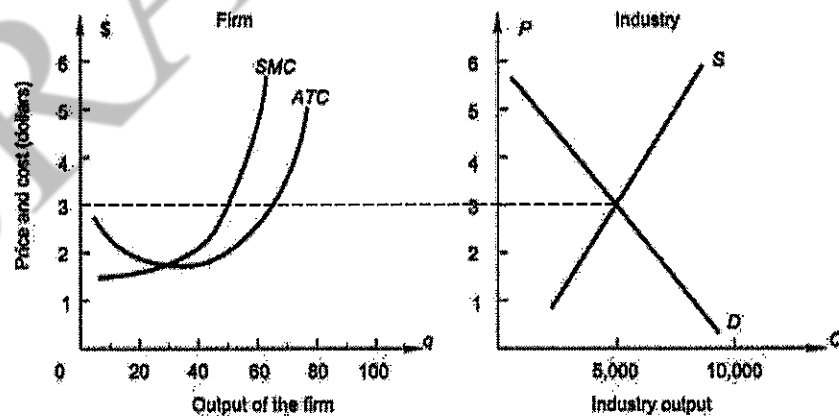


At any price above \$_____ demand is elastic.

- A. \$5
B. \$10
C. \$15
D. \$20

24. Referring to figure 6, the graph on the left shows the short run cost curves for a firm in a perfectly competitive market, and the graph on the right shows the current market conditions in this industry. What is the maximum amount of profit the firm can earn?

Figure 6. Short Run Cost of a Firm in the Market of Perfect Competition



- A. \$45
B. \$50
C. \$100
D. \$150

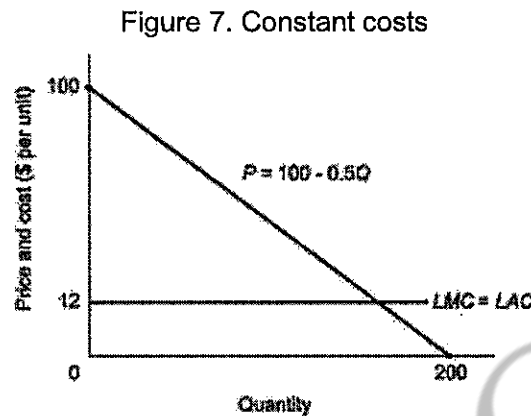
25. The market demand for a monopoly firm is estimated to be:

$$Q_d = 100,000 - 500P + 2M + 5000P_R$$

where Q_d is quantity demanded, P is price, M is income, and P_R is the price of a related good. The manager has forecasted the values of M and P_R will be \$50,000 and \$20, respectively, in 2024. For 2024, the forecasted demand function is

- A. $Q_d = 300,000 - 500P$
 - B. $Q_d = 100,000 - 100P$
 - C. $Q_d = 600,000 - 100P$
 - D. $Q_d = 200,000 - 500P$
26. Actions taken by oligopolists to plan for and react to actions of rival firms represent _____.
- A. strategic behavior
 - B. interdependence
 - C. cooperative behavior
 - D. game theory
27. One reason a firm or firms might charge a price lower than its profit-maximizing price is _____.
- A. to discourage the entry of new firms
 - B. to follow a tit-for-tat strategy
 - C. to erect multiproduct barriers to entry
 - D. a signal of weak competition

28. A firm faces the demand for its product, $P = 100 - 0.5Q$, as shown in figure 7 below. It produces under conditions of constant costs in the long run, and $LMC = LAC = \$12$ per unit.



If the firm can practice first degree price discrimination, how much is the total revenue?

- A. \$1872
 - B. \$1936
 - C. \$7744
 - D. \$9856
29. A firm produces two goods (X and Y) that are related in consumption. The demand function for X is:

$$Q_d = 120 - 4P_X - 10P_Y$$

Which of the following pairs of goods might the firm be producing?

- A. Cars and petrol
 - B. Cola and caffeine-free coke
 - C. Newspapers and tennis balls
 - D. Bran cereal and sugar-frosted corn flakes
30. A drugstore offers a discount on prescriptions to senior citizens. This suggests that the absolute value of elasticity of demand for senior citizens is _____.
- A. greater than one
 - B. less than one
 - C. greater than the elasticity of demand for other customers.
 - D. less than the elasticity of demand for other customers

SECTION B (Total: 70 marks)**INSTRUCTION: Answer ALL FIVE (5) Questions.****Please use the answer booklet provided.****Question 1 (10 marks)**

- (a) You are interviewing three people for one sales job. On the basis of your experience and insight, you believe Jamal can sell 600 units a day, Jane can sell 450 units a day, and Anis can sell 400 units a day. The daily salary each person is asking is as follows: Jamal, RM200; Jane, RM150; and Anis, RM100. How would you rank the three applicants? Clearly show your calculation and explain.

(5 marks)

- (b) A contact lenses manufacturer estimated the regression for returned lenses which are flawed (F) as below:

$F = a + bH$, where H is the number of hours inspecting the newly manufactured lenses.

The regression output is given in figure 8 as below:

Figure 8. Computer Printout

Dependent variable	F	R-square	F-ratio	p-value of F
Observation	22	0.4527	16.54	0.001
Variable	Parameter estimate	Standard Error	t-ratio	p-value
Intercept	90.0	28.13	3.20	0.004
H	-0.80	0.32	-2.50	0.021

What is the expected number of lenses returned if there is no inspection done on the newly manufactured lenses?

The estimate for b is – 0.80. Interpret the parameter estimate of -0.80.

(5 marks)

Question 2 (15 marks)

- (a) Name and explain any **ONE** factor that influence the price elasticity of demand for a product.

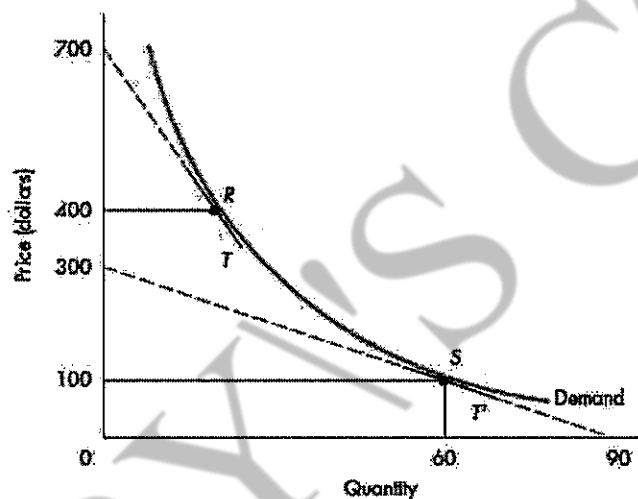
(3 marks)

- (b) Compare the price elasticity of demand for carbonated soft drinks and Coca-Cola. Which category has a larger price elasticity of demand in absolute term? Explain.

(4 marks)

- (c) Refer to figure 9 below.

Figure 9. Demand Curve



- i. Calculate the price elasticity at point S using the two methods learned in class. Why should you obtain the same answer from these two methods?
- ii. Calculate price elasticity of demand at point R. Show your calculation clearly and interpret the answer.

(8 marks)

Question 3 (15 marks)

- (a) Refer to table 1 below.

Table 1. Change in total product and change in number of workers using two machines for production.

Number of workers (L)	Total product (Q)	Average product	Marginal product
0	0	-	-
1	52	52	52
2	112	56	60
3	170		
4	220	55	50
5	230	51.6	38
6	258	47.7	28
7	304	43.4	18
8	314	39.3	10
9	318	35.3	4
10	314		

Calculate the average product and marginal product for $L = 3$ and $L = 10$. Show the formula and the steps of calculation.

(7 marks)

- (b) Is the firm producing in the short run or long run? Explain.

(4 marks)

- (c) There are two possibilities to produce 314 units by employing 8 workers or 10 workers. What is the economically efficient amount of labour to hire in this case? Why?

(4 marks)

Question 4 (15 marks)

- (a) Explain **THREE** key differences between the market structure of perfect competition and monopolistic competition.

(9 marks)

- (b) In a competitive industry, the market-determined price is RM12. For a firm currently producing 50 units of output, short-run marginal cost is RM15, average total cost is RM14, and average variable cost is RM7. Is this firm making the profit maximizing decision? Explain.

(6 marks)

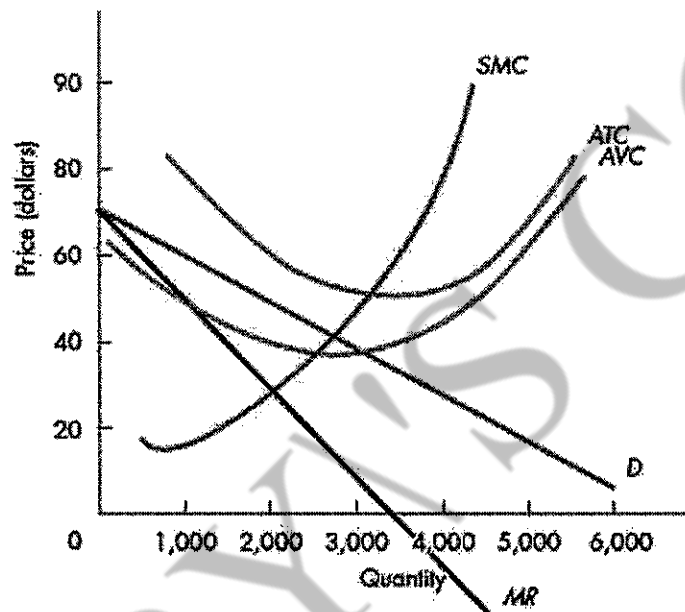
Question 5 (15 marks)

- (a) Explain "barrier to entry", and "economies of scale". Under what condition economies of scale creates barrier to entry for new firm in an industry.

(6 marks)

- (b) A monopoly firm with short-run cost curves are shown in figure 10 below.

Figure 10. Short Run Cost Curves of a Monopoly



As the manager of this firm,

- What rule do you follow to decide on the quantity of output?
- Based on the diagram, what is the profit maximizing quantity to produce?
- Based on the diagram, what is the price to set? Explain.
- Calculate the profit based on the answers of ii and iii. Copy the above diagram into your answer script and show the profit area on the diagram.

(9 marks)

END OF EXAMINATION PAPER