



**UNIVERSITI KUALA LUMPUR
BUSINESS SCHOOL**

**FINAL EXAMINATION
MARCH 2024 SEMESTER**

COURSE CODE : EGB10403
COURSE NAME : INTERMEDIATE MICROECONOMICS
PROGRAMME NAME : BACHELOR OF SCIENCE (HONS) IN ANALYTICAL ECONOMICS
DATE : 6 JULY 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; **Section A** and **Section B**.
4. Answer **ALL** questions from **Section A** and **Section B**.
5. Please write your answers on the 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 TEN (10) PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 25 marks)

INSTRUCTION: Answer ALL questions.**Please use the objective answer sheet provided.**

1. In the market of rice, harvest is badly affected by flood and at the same time young people believe in reducing carbohydrates (such as rice) intake, what is expected to happen to the market of rice in the short run?
- A. Price of rice will rise but quantity traded cannot be determined.
B. Quantity of rice traded will fall but price cannot be determined.
C. Price of rice will fall but quantity traded cannot be determined.
D. Price of rice and quantity traded cannot be determined.
2. Suppose a consumer is consuming 20 units of good x and the price of good x increased by RM3. What change in income is required to restore this consumer's purchasing power?
- A. RM30
B. RM60
C. RM90
D. RM120
3. Gathering durians in the orchard requires only labour input. The number of durians gathered per hour is given by $X = 100(L)^{1/2}$, where L is labour per hour. The average product of labour and the marginal product of labour are:
- A. $100(L)^{1/2}$, $50(L)^{1/2}$
B. $100(L)^{-1/2}$, $50(L)^{-1/2}$
C. $50(L)^{1/2}$, $50(L)^{-1/2}$
D. 100, 100L
4. Production function for a firm is given as $X = \sqrt{LK}$, where L is labour and K is capital. Given costs of inputs $w = \text{RM}1$, $v = \text{RM}4$ and $K = 1$. Assume perfect competition and the market price for the output is p. The firm's short run supply curve is given by _____.
- A. $X = p/2$
B. $X = 2p$
C. $X = 2$
D. $X = p$

5. A monopoly firm is facing a market demand curve given by $p = 50 - 5Q$ and its marginal cost and average cost are $MC = AC = RM10$. Calculate the profit maximization output and price for this firm.
- A. $Q^* = 4, P^* = 30$
- B. $Q^* = 4, P^* = 4$
- C. $Q^* = 8, P^* = 10$
- D. $Q^* = 8, P^* = 8$
6. A monopoly firm will always produce in the elastic range of the demand curve because:
- I. the inelastic range indicates negative marginal revenue (MR)
- II. revenue is increasing when more quantity is sold at lower prices
- III. $MR = p(1 - 1/e)$ where e is the elasticity of demand
- IV. revenue is at the maximum before demand curve reaches the unit elastic point
- A. I and III only
- B. II and IV only
- C. I, II, III and IV
- D. None of the above
7. A firm sells an identical product to two different markets. The two demand curves are:
 $P_1 = 500 - 8X_1$
 $P_2 = 400 - 5X_2$
 $Q = X_1 + X_2$ is the total produced and sold.
The total cost is given by $TC = 10000 + 20Q$.
The prices firm would be selling:
- A. $P^*_1 = 120, P^*_2 = 240$
- B. $P^*_1 = 30, P^*_2 = 38$
- C. $P^*_1 = 260, P^*_2 = 210$
- D. $P^*_1 = 480, P^*_2 = 380$
8. What is a dominant strategy?
- A. A strategy to analyse the behaviour of firms in a perfectly competitive market.
- B. A strategy that yields the best result no matter what an opponent does.
- C. A plan to calculate the possibility of suffering loss in a business.
- D. An action taken by a firm to force competitors out of the market.

9. Refer to the game matrix between two firms selling similar products as shown in Diagram 1.

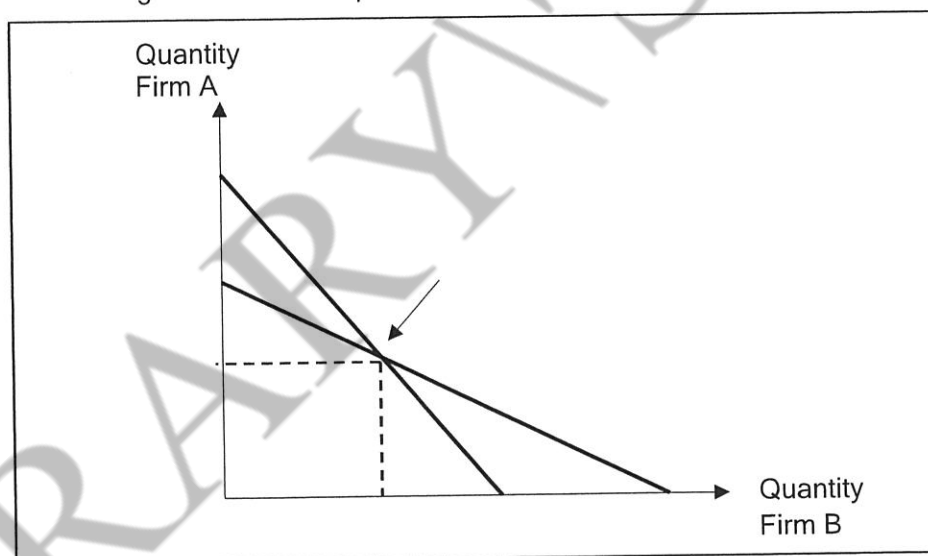
Diagram 1: Price Strategies for Two Firms

		Firm A	
		RM5	RM7
Firm B	RM5	50, 50	100, 0
	RM7	0, 100	90, 90

Under non-cooperative game, what is the price charged by Firm B and what is the profit?

- A. $P_B^* = \text{RM}5$, $\text{profit}_B = 50$ C. $P_B^* = \text{RM}5$, $\text{Profit}_B = 100$
 B. $P_1^* = 30$, $P_2^* = 38$ D. $P_1^* = 480$, $P_2^* = 380$
10. Refer to Diagram 2, in a duopoly market, the intersection of the two best-response curves indicates:

Diagram 2: Best Response Curves for Two Competing Firms



- A. Bertrand equilibrium C. Price-taking equilibrium
 B. Cartel equilibrium D. Cournot equilibrium

11. A firm will maximise profit by hiring workers until the _____.
- A. marginal revenue product of the last worker exactly equals the marginal cost of employing that worker
 - B. marginal product of the last worker exactly equals the marginal cost of employing that worker
 - C. price of the last output by the last worker equals the marginal cost of employing the next worker.
 - D. total revenue generated equals the total cost of employing all the workers.
12. Assume an individual consumption depends on consumption (C) and hours of leisure (h), and w is the wage received per hour of work. Utility = $U(c, h)$. To maximise utility, the individual is bound by the following constraint:
- A. $C = 24h$
 - B. $C = 24w$
 - C. $C = 24/w$
 - D. $C = w(24 - h)$
13. Wage differences occur due to the following reasons **EXCEPT**:
- A. Job search uncertainty causes job seekers to set a reservation wage and take the first job that offered the wage.
 - B. Differences in human capital leads to differences in productivity and thus different wages.
 - C. Compensating differentials such as higher wages for higher risk jobs to attract workers.
 - D. Job seekers agree to wage exactly equals their marginal revenue product.
14. The marginal revenue product of the last worker employed is the _____.
- A. height of the firm's labour demand curve for the number of workers the firm employs
 - B. market equilibrium wage in the labour market for the number of workers the firm employs
 - C. height of the supply curve of labour faced by the firm
 - D. lowest cost of the firm

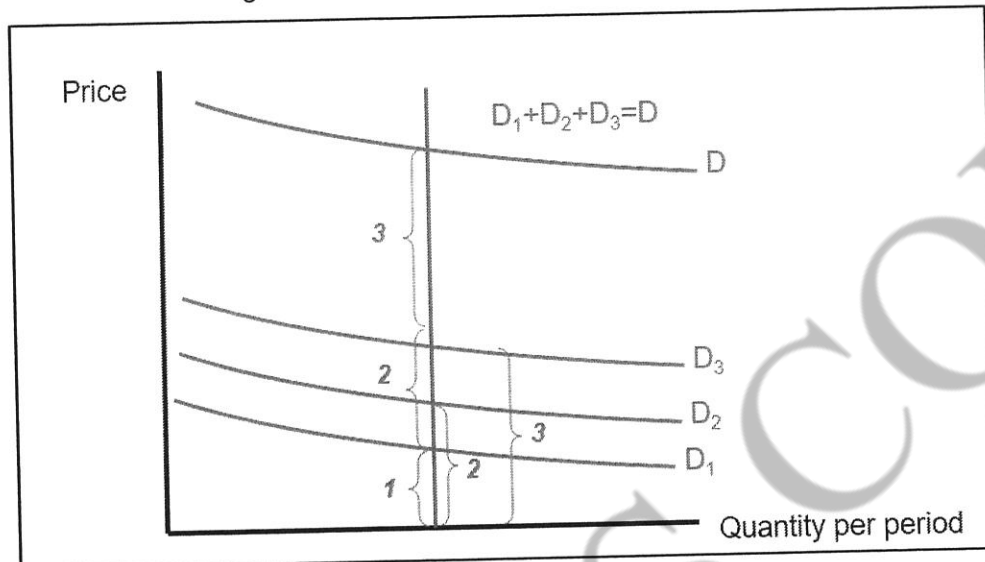
15. Which of the statements below is correct pertaining to Edgeworth Box Diagram?
- I. Competitive market will exhibit inefficient input choices.
 - II. The isoquant maps for two goods have origins at two opposite corners.
 - III. Efficient allocations will occur where the isoquants are tangent to one another.
 - IV. Efficient allocations will occur where the isoquants are crossing each other.
- A. I and III C. I, II and III
B. II and III D. I, II, III and IV
16. Choose the statement that **BEST** explains "pareto efficiency".
- A. Pareto efficiency occurs when the government intervenes in the free market to ensure equal distribution of goods.
 - B. Pareto efficiency is achieved when one's utility is maximized at the expense of another.
 - C. Pareto efficiency is a situation where it is impossible to make one person better off without making another worse off.
 - D. Pareto efficiency is only achievable in a perfectly competitive market.
17. In the context of general equilibrium, what is implied by Walrasian equilibrium?
- A. A situation where the government set prices and allocate resources in every market.
 - B. An equilibrium condition where demand equals supply in a single market.
 - C. A point where all markets clear simultaneously through price adjustments.
 - D. A situation where consumers maximise utilities and firms maximise profit.
18. Asymmetric information refers to:
- A. Consumers and suppliers both have access to information about a product.
 - B. A situation where one party has more information about a transaction than the other party.
 - C. The presence of government regulations that ensure transparency in the market.
 - D. A situation where prices are adjusted to reflect all available information in the market.

19. Select an example that **BEST** describes “adverse selection” due to asymmetric information.
- A. A property agent providing detailed information about the condition of the house.
 - B. Individuals who are smokers declared themselves to be non-smokers when signing up for health insurance.
 - C. Big companies offer higher salaries to attract skilled workers.
 - D. Banks offer lower interest rates to customers with good credit standings.
20. To address the issue of asymmetric information, insurance companies may do the following **EXCEPT**:
- A. require the customer to bear costs in the form of deductibles and copayments
 - B. require the potential customer to produce a full medical report
 - C. revise the premiums down as the customer gets older
 - D. cap the insurer’s liability for the damage claimed
21. How does moral hazard arise due to asymmetric information?
- A. Consumers are unaware of the true quality of products they purchase.
 - B. Firms provide false information to manipulate market outcomes.
 - C. Individuals become careless after signing an agreement knowing their behaviour cannot be monitored.
 - D. Government regulations impose restrictions on the flow of information in markets.
22. Which of the following scenarios best illustrates the “lighthouse” example often used in discussions of public goods?
- A. A privately-owned beach resort charges admission fees for access to its facilities.
 - B. A community-funded project installs solar-powered streetlights in a neighbourhood.
 - C. A subscription-based streaming service offers exclusive content to paying subscribers.
 - D. A government agency provides subsidies to farmers to encourage crop production.

23. Which of the following scenarios **BEST** describes how externalities can influence a firm's performance?
- A. Externalities have minimal impact on firm performance, as firms can internalize external costs and benefits through market mechanisms.
 - B. Externalities arise when firms neglect to consider the societal impacts of their production or consumption activities, leading to suboptimal outcomes.
 - C. Firms are generally insulated from externalities as government regulations and interventions ensure that market outcomes remain efficient.
 - D. Externalities create opportunities for firms to exploit market inefficiencies and gain competitive advantage, regardless of societal consequences.
24. In the presence of public goods, why a competitive market would fail to allocate resources efficiently?
- A. Competitive markets are inherently inefficient due to excessive government regulation and intervention.
 - B. Public goods are characterized by non-excludability and non-rivalry in consumption, making it impractical for private firms to supply them.
 - C. Competitive markets prioritise the interests of individual consumers and producers, often overlooking the broader societal benefits of public goods provision.
 - D. The presence of public goods leads to market failure, as firms lack incentives to produce them, and consumers may free-ride on the contributions of others.

25. Refer to Diagram 3 below and choose the **CORRECT** statement.

Diagram 3. Price and Quantity of a Public Good



- A. The demand curve D is a horizontal summation of all the individual demand curves.
- B. The price of a public good that an individual is willing to pay is the sum of what each individual would pay.
- C. A private firm will provide the public good if consumers are willing to pay the price of 3.
- D. Regardless of the price, private firms will not produce public goods.

SECTION B (Total: 75 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

Explain the concept of “moral hazard” in the labour market. Name and explain **TWO** potential mechanisms for firms to mitigate moral hazard among the workers.

(9 marks)

Question 2

Suppose the production possibility frontier for machine (x) and food (y) is given by

$$x^2 + 2y^2 = 900$$

- (a) Sketch the frontier. (3 marks)
- (b) If individuals always prefer consumption bundles in which $y = 2x$, how much x and y will be produced? (3 marks)
- (c) At the point described in (b), what will be the rate of product transformation and hence what price ratio will cause production to take place at that point? (5 marks)

Question 3

Discuss the use of Pigouvian tax in correcting negative externalities. In your answer, explain how Pigouvian taxes work, why they are considered an effective policy tool for correcting market failures, and provide examples of their application in real-world situations.

(15 marks)

Question 4

Discuss the concept of price discrimination in an imperfect market structure. Explain the different types of price discrimination and provide real-world examples of each. Evaluate the efficiency and welfare implications of price discrimination for consumers, producers, and society as a whole.

(20 marks)

Question 5

Suppose there are two firms producing bottled spring water. Each firm has a large supply of spring water and faces the problem of how much to provide the market. A firm's cost of pumping and bottling q_i liters is $C_i(q_i) = cq_i$, implying that marginal costs are a constant c per liter. Inverse demand for spring water is $P(Q) = a - Q$, where a is the intercept, and total spring water output, $Q = q_1 + q_2$. (State your assumptions and the symbols used clearly.)

- (a) Use the Bertrand model to determine the total output and total market profit. (6 marks)
- (b) Use the Cournot model to determine the total output and total market profit. (10 marks)
- (c) Compare the Nash equilibrium output and total market profit of these two models. (4 marks)

END OF EXAMINATION PAPER