PART A
INSTRUCTIONS:  1. THERE ARE FOUR (4) QUESTIONS IN THIS PART.
    2. ANSWER ALL QUESTIONS.

Question 1
Wayar Bagus Bhd (WYB) supplies standard electrical wiring to the construction and renovator markets. Like the output of its competitors, WYB’s household BGS-7 wire must meet strict governmental specifications. As a result, the BGS-7 wire supply industry can be regarded as perfectly competitive. Total and marginal cost relations for WYB are:

\[ TC = RM3,600 + RM5Q + RM0.01Q^2 \]

where \( Q \) is hundreds of feet of wire produced.

a. Compute WYB’s optimal output and profits if BGS-7 wire prices are stable at RM20.
   [4 marks]

b. Calculate WYB’s optimal output and profits if BGS-7 wire prices rise to RM25 each.
   [4 marks]

c. If WYB is a typical firm in the industry, calculate the firm’s equilibrium output, price, and profit levels.
   [7 marks]

[TOTAL: 15 MARKS]
Question 2

Uthani Carpet, is a leading manufacturer of stain-resistant carpeting. Demand for Uthani products is tied to the overall pace of building and remodeling activity and, therefore, is sensitive to changes in national income. The carpet manufacturing industry is highly competitive, so Uthani’s demand is also very price-sensitive. During the past year, Uthani sold 28 million square yards (units) of carpeting at an average wholesale price of RM16 per unit. This year, GNP per capita is expected to fall from RM19,000 to RM17,000 as the nation enters a steep recession. Without any price change, Uthani expects current-year sales to fall to 20 million units.

a. Calculate the implied arc income elasticity of demand. [5 marks]

b. Given the projected fall in income, the sales manager believes that current volume of 28 million units could only be maintained with a price cut of RM2 per unit. On this basis, calculate the implied arc price elasticity of demand. [5 marks]

c. Holding all else equal, would a further increase in price result in higher or lower total revenue? [5 marks]

[TOTAL: 15 MARKS]
Question 3

Various beverages are sold by roving vendors at Shah Alam Stadium, home of the PKNS FC. Demand and supply of the product are both highly sensitive to changes in the weather. During hot season, demand for ice-cold beverages grows rapidly. On the other hand, hot dry weather has an adverse effect on supply in that it taxes the stamina of the vendor carrying his/her goods up and down many flights of stairs. The only competition to this service is the beverages that can be purchased at kiosks located throughout the stadium.

Demand and supply functions for ice-cold beverages per game are as follows:

\[
\begin{align*}
Q_D &= 20,000 - 20,000P + 7,500PK + 0.8Y + 500T \\
Q_S &= 1,000 + 12,000P - 900PL - 1,000PC - 200T
\end{align*}
\]

Where,
- \( P \) is the average price of ice-cold beverage (RM per beverage);
- \( PK \) is the average price of beverages sold at the kiosks (RM per beverage);
- \( Y \) is disposable income per household for baseball fans;
- \( T \) is the average daily high temperature (degrees);
- \( PL \) is the average price of unskilled labour (RM per hour); and
- \( PC \) is the average cost of capital (in percent).

a. When quantity is expressed as a function of price, what are the ice-cold beverage demand and supply curves if \( P = RM5 \), \( PK = RM4 \), \( Y = RM62,500 \), \( T = 80 \) degrees, \( PL = RM10 \), and \( PC = 12\% \). [5 marks]

b. Calculate the surplus or shortage of ice-cold beverage when \( P = RM4 \). [5 marks]

c. Calculate the market equilibrium price-output combination. [5 marks]

[TOTAL: 15 MARKS]
Question 4

a. Economists have long argued that if you want to tax away excess profits without affecting allocative efficiency, you should use a lump-sum tax instead of an excise or sales tax. Use the concepts developed in the output, revenue and profit topics to support this position.

[5 marks]

b. How is the popular notion of business profit different from the economic profit concept described in the course? What role does the idea of normal profits play in this difference?

[5 marks]

[TOTAL: 10 MARKS]
PART B
INSTRUCTIONS:  1. THERE ARE **FOUR (4) QUESTIONS** IN THIS PART.
   2. ANSWER **THREE (3) QUESTIONS** ONLY.

Question 1

Tulis Bhd faces the following segmented demand and marginal revenue curves for its mechanical pencils:

Over the range of 0 to 25(000) units of output:

\[ P_1 = 6 - 0.04Q \]
\[ MR_1 = \frac{MTR_1}{MQ} = 6 - 0.08Q \]

When output exceeds 25(000) units:

\[ P_2 = 8 - 0.12Q \]
\[ MR_2 = \frac{MTR_2}{MQ} = 8 - 0.24Q \]

The company’s total and marginal cost functions are as follows:

\[ TC = 2.50 + 1.50Q + 0.02Q^2 \]
\[ MC = \frac{MTC}{MQ} = 1.50 + 0.04Q \]

where \( P \) is price (in RM), \( Q \) is output (in thousands), and \( TC \) is total cost (in thousands of Ringgit).

a. How would you describe the market structure of this industry? [2 marks]

b. Calculate price, output, and profits at the profit-maximizing activity level. [7 marks]

c. How much could marginal costs rise before the optimal price would increase? How much could they fall before the optimal price would decrease? [6 marks]

[**TOTAL: 15 MARKS**]
Question 2
Tara Botak Bhd, manufactures a high-performance tyre called Tabotak 70. Fixed development costs for the current year are RM600,000. Marginal costs for manufacturing and distribution are RM63 per tyre. Based on recent sales experience, the estimated demand curve and marginal revenue relations for Tabotak 70 are:

\[ P = RM130 - RM0.000125Q \]

a. Calculate output, price, total revenue, and total profit at the revenue-maximising activity level.

[5 marks]

b. Calculate output, price, total revenue, and total profit at the profit-maximising activity level.

[5 marks]

c. Compare and discuss your answers to parts A and B.

[5 marks]

[TOTAL: 15 MARKS]

Question 3

a. Explain why company productivity is important to managers, employees, and investors. Is superior worker productivity a necessary and sufficient condition for above-average compensation?

[8 marks]

b. “Hourly wage rates are an anachronism. Efficiency requires incentive-based pay tied to performance.” Discuss this statement.

[7 marks]

[TOTAL: 15 MARKS]

Question 4

a. Describe a circumstance in which multicollinearity is likely to be a problem. Discuss a possible remedy.

[7 marks]

b. Is serial correlation apt to be a problem in a time series analysis of quarterly sales data over a 10-year period? Identify a possible remedy, if necessary.

[8 marks]

[TOTAL: 15 MARKS]

QUESTION PAPER ENDS HERE