



# Microeconomics Unit 4

## Free Response Questions

**FRQ #1-** Assume that Zyggye's Ice Cream Parlor currently has a local monopoly for ice cream sundaes and is earning positive economic profit.

- Draw a correctly labeled graph for Zyggye's Ice Cream Parlor and show each of the following.
  - The profit-maximizing price and quantity, labeled PM and QM.
  - The area representing the firm's total profit.
  - The quantity where total revenue is maximized, labeled QTR.
- Is the profit maximizing quantity greater than, less than, or equal to the socially optimal quantity?
- Assume that the city council places a per unit excise tax on ice cream sundaes. Will the following increase, decrease, or stay the same when Zyggye's Ice Cream Parlor produces the profit maximizing quantity?
  - Total revenue. Explain.
  - Deadweight loss.
- If Zyggye's Ice Cream Parlor were able to perfectly price discriminate, would the following increase, decrease, or stay the same?
  - Consumer surplus. Explain.
  - Deadweight loss.
- Now assume that other firms start selling ice cream sundaes resulting in a monopolistically competitive market. Draw a new correctly labeled graph for ice cream sundaes in the long run. Label the profit-maximizing price and quantity  $P^*$  and  $Q^*$ .

**FRQ #2-** The payoff matrix below shows the daily profits for the only two hotels in town. The first number in each box is the profit for Hotel A and the second number is the profit for Hotel B. Both hotels are deciding whether or not to offer breakfast and have complete information.

		Hotel B	
		Offer Breakfast	Do Not Offer Breakfast
Hotel A	Offer Breakfast	\$200, \$250	\$120, \$170
	Do Not Offer Breakfast	\$50, \$200	\$150, \$150

- In which market structure do these hotels operate? Explain.
- What is the best response for Hotel B if Hotel A decides not to offer breakfast.
- Does Hotel A have a dominant strategy? Explain.
- Identify the Nash equilibrium.
- Assume that a new breakfast restaurant opens near Hotel B which causes the daily profit for Hotel B to decrease by \$100 when they offer breakfast at the hotel. Complete the following:
  - Identify Hotel B's dominant strategy.
  - Identify Hotel A's daily profit at the Nash equilibrium.