Assessment Task 3: Microeconomic Case Analyses & Problem solving

**Question 1**

[Mexico represents a small part of the world orange market.]

1. [Draw a diagram depicting the equilibrium in the Mexican orange market without international trade. Identify and label the equilibrium price, equilibrium quantity, consumer surplus, and producer surplus on the diagram. **(3 marks)**]
2. [Suppose the Mexican orange market is now opened to trade. Assume that the world orange price is below the Mexican price (before trade). Draw a separate graph to show this development. Identify and label the price and quantity traded before and after trade clearly on the diagram. No explanation required. **(3 marks)**]
3. [Explain changes in consumer surplus, producer surplus and total surplus for Mexico before and after the trade. Has total surplus increased or decreased? (Hint: You can choose to use the table to show consumer surplus, producer surplus and total surplus in scenarios in part (a) and part (b) and change in their size as done in the lecture.)

**(2 marks)**]

1. [Assume that the orange growers lobby succeeded in convincing the government to impose a tariff on orange imports. Compared to part B above, what is the change in consumer surplus, producer surplus and the total surplus? Show this imposition of tariff in a new diagram and identify these changes (**2 marks)** Use a tabular format to present these changes in welfare (consumer surplus, producer surplus and total surplus) from tariff (i.e. scenario in part b: without tariff to part d: with tariff) **(2 marks)** Does this policy create deadweight loss? **(0.5 marks)**

**Answer**

**Question 2**

[We learnt in the lectures that a monopolist can exercise price discrimination. *Price discrimination* refers to the business practice of selling the same good at different prices to different customers. Let’s assume a simple case that our monopolist’s production costs are simply proportional to output, so that average total cost (ATC) and marginal cost (MC) are constant and equal.]

1. [Draw a figure with cost (average total cost and marginal cost), demand, and marginal revenue curves for the monopolist. Show and label the monopoly price and quantity without price discrimination in your figure. In your diagram, mark the area equal to monopolist’s profit and call it X. Mark the area equal to consumer surplus and call it Y. Mark the area equal to deadweight loss and call it Z. **(6.5 marks)**]
2. [Now suppose that the monopolist can perfectly price discriminate. What is the monopolist’s profit? What is the deadweight loss? (Give your answer in terms of X, Y and Z) **(2 marks)**]
3. [What is the change in the monopolist’s profit from price discrimination? What is the change in total surplus from price discrimination? Which change in larger? Explain (Give your answer in terms of X, Y and Z). **(4 marks)**]

**Answer**

**Question 3**

[Payroll tax is like a sales tax but applies to workers’ wages. Many economists have called the state payroll tax a “tax on employment”.]

1. [Suppose that the equilibrium wage is given by $18 per hour. The government introduces a payroll tax on employment of $4 per hour that must be paid to the government by employers. Show in a diagram, how this will lead to a reduction in employment (quantity of labour employed in hours). Explain in 100 or less words who will bear the cost of the payroll tax? (Hint: show wages on Y axis and quantity of labour in hours on X axis in your labour demand and supply model).

**(5 marks)**]

1. [Now, suppose that before the government introduces the payroll tax, there is a minimum wage set at $22 per hour. Explain in 2-3 sentences why this wage floor is binding. Also, explain in 1-2 sentences the effect of this price floor on employment and unemployment. (i.e., quantity of labour employed in hours. No diagrams needed.

**(3 marks)**]

1. [This minimum wage law stays in place when the payroll tax is introduced so that employers must pay workers at least $22 per hour and then pay an extra $4 per hour to the government in tax. **(4.5 marks in total)**]
   1. [What is the effect of this payroll tax (in addition to minimum wages) on quantity of labour demanded? Explain in 2-3 sentences. **(1.5 marks)**]
   2. [Explain in 100 or less words how will the payroll tax affect the level of unemployment? **(3 marks)** (Hint: unemployment here refers to excess supply of labour).]

Answer

**Question 4**

[This question tests your understanding of the concept of *elasticity*. Elasticity, a measure of how much buyers and sellers respond to changes in market conditions, allows us to analyse supply and demand with greater precision. Let’s answer some questions on *elasticity* below:]

1. [What is total revenue? Explain in 100 or less words how price elasticity of demand affects the total revenue of the producers? **(2.5 marks)**]
2. [Consider the following pairs of goods. For which of the good in each pair would you expect the demand to be more price elastic? List the underlying determinant of price elasticity of demand causing this? (Write the determinant without explanation).

*(1 mark for correctly finding the (more) elastic good + 1 mark for the determinant)*

***(*10 marks)**]

* 1. walnut or salt
  2. Flat screen monitor or monitors in general
  3. Gasoline in short run or diamond earring
  4. Blue jeans or Tommy Hilfiger jeans
  5. Motor oil or cooking oil

**Answers**