**ECO101: Introduction to Microeconomics**

**Group Assignment**

**Total marks: 30 (will be converted to 15%)**

**Instructions:**

* *Submit your answers in clear A4 size papers which should be stapled properly. Loose papers will not be accepted.*
* *Answer the following questions in the given order only. Make sure to number your answers clearly.*
* *Only handwritten answers will be accepted. Do not submit typed answers.*
* *You must write all group member’s full name, ID, and section number on the first page.*
* *Any assignment submitted after the time mentioned will not be considered.*

**Answer all questions:**

1. The weekly demand function for butter in the province of Quebec is given as:

Qd = 20000 - 500Px + 25M + 250Py, where

Qd is the quantity in kilograms purchased per week,

Px is the price of one kilogram of butter in dollars,

M is the average annual income of a Quebec consumer in thousands of dollars, and

Py is the price of a kilogram of margarine in dollars.

Assume that M = 20, Py = $2, and the weekly supply function is such that the equilibrium price of one kilogram of butter is Px = $14.

a. Find the quantity demanded of butter in kilograms. **[2 marks]**

b. The price of a kilogram of margarine increased to Py = $4. In response to changes in the

price of margarine, calculate and comment on the cross-price elasticity of the demand for

butter given all other factors (Px and M) remain the same. **[3 marks]**

c. Say that the average annual income of consumers now increased to M = 22. Assuming Py

remains unchanged at Py = $2, calculate and comment on the income elasticity of demand

for butter at the equilibrium. **[3 marks]**

d. The price elasticity of demand for butter is -0.5. What significance does this fact hold for

suppliers of butter? **[2 marks]**

2. For each of the following scenarios, draw a demand-supply diagram to illustrate and explain the effects of the given shocks on the equilibrium price and quantity in the specified competitive market. Assume that each market is initially at equilibrium:

a. (2.5 Marks) Initially, the market for laptops was at equilibrium, with the demand for and supply of laptops balanced. However, due to a sudden increase in remote work and online learning, the consumption of laptops surged. Additionally, technological advancements have led to more efficient manufacturing processes, resulting in an increase in the production of laptops. If the consumption of laptops increased more than the impact of technological advancement, describe the impact of these changes in both demand and supply on the market for laptops.

b. (2.5 Marks) A major cocoa-producing country has experienced adverse weather conditions, leading to a decrease in cocoa bean production. How do you expect the equilibrium price and quantity of dark chocolates to change? Provide a justification for your answer.

3. The following table displays the production possibility of three cafes in an hour:

|  |  |  |
| --- | --- | --- |
|  | Iced Coffee | Iced Tea |
| North End | 3 | 5 |
| Tabaq | 5 | 6 |
| Crimson Cup | 2 | 4 |

1. a. What is **North End’s** opportunity cost of producing 10 Iced coffees? **[2 marks]**
2. b. Which Cafe has an absolute advantage in making Iced coffees and Iced Teas? **[2marks]**
3. c. Which Cafe should specialize in producing Iced coffee? Justify your answer using the concept of comparative advantage. **[3 marks]**
4. d. Which Cafe should specialize in producing Iced tea? Justify your answer using the concept of comparative advantage. **[3 marks]**