



**Strathmore**  
UNIVERSITY

**STRATHMORE BUSINESS SCHOOL**  
MASTER OF SCIENCE IN DEVELOPMENT FINANCE  
END OF SEMESTER EXAMINATION  
MDF 8102: MICRO AND MACRO ECONOMICS

**Date:** Monday, 5<sup>th</sup> December 2022

**Time:** 3 Hours

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**Instructions**

1. This examination consists of **FOUR** questions.
2. Answer **QUESTION ONE** and **ANY OTHER TWO** questions.

**Question 1 (Compulsory) (30 marks)**

- a) With the help of a well labeled diagram, discuss the total welfare cost of a price support policy to maize farmers. **(15 Marks)**
- b) In 1997, Toyota Motor Corporation introduced the Prius in Japan, and started selling it worldwide in 2001. The design and efficient production of the Prius, the first hybrid car, involved not only some impressive engineering, but a lot of economics as well. Discuss the key economic issues that Toyota considered when producing Prius car. **(15 Marks)**

**Question 2 (15 marks)**

Maurice has the following utility function:  $U(X,Y) = 20X + 80Y - X^2 - 2Y^2$ , where  $X$  is his consumption of CDs, with a price of \$1, and  $Y$  is his consumption of movie videos, with a rental price of \$2. He plans to spend \$41 on both forms of entertainment. Determine the number of CDs and video rentals that will maximize Maurice's utility.

**Question 3 (15 marks)**

Draw a well-labelled diagram showing the effects of import quotas and conduct a welfare analysis. The welfare analysis should identify all the effects of import quotas to the economy.

**Question 4 (15 marks)**

You are provided the following information for a duopoly in a small town with 140 residents. The “good”: cell phone service with unlimited anytime minutes and free phone. Two firms: Zain, Yu. Each firm’s costs:  $FC = \$0$ ,  $MC = \$10$

The table below shows the Small town’s demand schedule

<i>P</i>	<i>Q</i>
\$0	140
5	130
10	120
15	110
20	100
25	90
30	80
35	70
40	60
45	50

Required:

- a) Derive the small town competitive and monopoly outcomes from the data provided. Justify your outcomes. **(6 Marks)**
- b) What outcomes should we expect from our duopolists? **(9 Marks)**