



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

COURSE CODE : CEC 414
COURSE TITLE : MANAGERIAL ECONOMICS
DURATION : 3 Hours
LEVEL : 4.1

09 APR 2024

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed
3. Answer question number **one (1)** in Section A (Compulsory) and any other **three (3)** questions in Section B.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets []
6. Show all workings, where applicable.

SECTION A

Question 1: Doughnut market

Consumers love to eat doughnuts. In 2019, 10 billion of these deep-fried sugar-coated products were consumed in the United States (US). Doughnuts are widely available throughout the US. There are specialist shops selling their branded products almost everywhere; local coffee shops invariably sell 'hole in one' doughnuts as a popular breakfast snack to tempt consumers on their way to work. The growing number of shops selling doughnuts has been an important reason behind overall market growth.

The COVID-19 pandemic has had a varying impact on the US doughnut market. Despite having less income, many consumers have continued to buy small luxuries such as doughnuts which remain affordable and can provide some short-term relief from the stresses of the pandemic. Overall, sales of doughnuts fell in 2020 and are forecast to remain below their 2019 peak into 2021. Reasons for this fall in demand are that consumers are making fewer shopping trips and in cities, more people are working from home and therefore not buying their daily coffee and doughnut snack.

In the United Kingdom (UK), more so than in the US, there are growing concerns about the increase in sugar consumption amongst children. This increase comes from soft drinks, chocolate biscuits and sweets (candy) as well as from jam-filled doughnuts, all of which are widely available in supermarkets and local convenience stores. In 2021, it was estimated that a third of teenagers and two thirds of adults in the UK were overweight. This has increased the pressure on the UK government to end online advertising of a range of products including doughnuts. It has been estimated that viewing one minute of advertising for products like doughnuts leads to a child consuming an additional 14.2 calories. Moreover, a ban on advertising sugary foods would result in children consuming the equivalent of 62 million fewer doughnuts a year in the UK.

- a. Explain two reasons why the US market for doughnuts contracted in 2020. [6 marks]
- b. Comment on whether the demand for doughnuts in the US is income elastic or income inelastic. [4 marks]
- c. With the help of a diagram, assess how the market for sugary foods in the UK might be affected by a ban on online advertising. [7 marks]
- d. Assess the likely effects on UK consumers and the UK government of a ban on online adverts for sugary foods. [8 marks]

SECTION B

Question 2

- a. Explain, with the help of examples, the significance of the size and sign of the coefficient of income elasticity of demand for the classification of a good and consider how confident you are of this classification. [10 marks]
- b. Discuss any two ways regression results for an estimated demand may indicate signs of omitted variables. [15 marks]

Question 3

- a. Compare and comment on Returns to Scale (RTS) of the following production functions:
- i. $Q = 3K^{\frac{1}{4}}L^{\frac{3}{4}}$
- ii. $Q = 50 + 100K^3 + 100L^3$ [12 marks]
- b. A manager hires labor and rents capital equipment in a very competitive market. Currently the wage rate is \$6 per hour and capital is rented at \$12 per hour. If the marginal product of labor is 50 units of output per hour and the marginal product of capital is 75 units of output per hour.
- Using appropriate computations, consider whether the firm is using the cost-minimizing combination of labor and capital and make appropriate recommendation. [13 marks]

Question 4

Suppose all firms have an identical cost curve:

$$TC = 40Q - Q^2 + 0.1Q^3$$

Market demand is:

$$Q = 25000 - 1000P$$

Determine if both profit maximisation and zero profits can be obtained at the same point in the long run. [25 marks]

Question 5

- a. Explain how cheating on collusive agreements can be justified by the prisoner's dilemma? [7]

- b. The equilibrium for two firms Munashe and Angel which are deciding to position a new product in a differentiated product market environment can be presented in the matrix below:

Players' Payoff Matrix		Angel/ Firm 2	
		Strategy A	Strategy B
Munashe/ Firm 1	Strategy A	-400;-400	-1 000;0
	Strategy B	0;-1 000	-700;-700

- i. Determine the equilibrium of this game, if any. [8]
- ii. Assess whether the equilibrium of this game is Nash or otherwise. Give examples or illustrations whenever possible. [10]

15/18 pm

--The End--

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