



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING

DEPARTMENT OF BUSINESS ADMINISTRATION AND MANAGEMENT

EXAMINATION PAPER

COURSE CODE : **CEC 404**
COURSE TITLE : **MANAGERIAL ECONOMICS**
DURATION : **3 HOURS**
LEVEL : **4.1**
DATE :

INSTRUCTIONS TO CANDIDATES:

1. There are five (5) questions in this paper.
2. Each question carries twenty-five marks (25).
3. Answer question one (1) and any other three (3) questions.
4. Electronic calculators are allowed
5. No cell phones are allowed in the examination venue.
6. Show all your workings in order to gain full marks.
7. Begin each answer on a new page.
8. **DO NOT OPEN THIS PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.**

Question 1

1. Given the market demand equation for manure as follows:

$$Q = 1\,500 - 200P$$

Calculate all the numbers necessary to fill in the following table

| P (\$) | Q | Point Elasticity | Total Revenue | Marginal Revenue |
|--------|---|------------------|---------------|------------------|
| 7.00 | | | | |
| 6.50 | | | | |
| 6.00 | | | | |
| 5.50 | | | | |
| 5.00 | | | | |
| 4.50 | | | | |
| 4.00 | | | | |
| 3.50 | | | | |
| 3.00 | | | | |
| 2.50 | | | | |

[20]

- b. Comment on the relationship between elasticity, total revenue and marginal revenue.

[5]

Question 2

- a. Is there any difference between demand estimation and demand forecasting? Explain.

[4]

- b. The sales data for the Pepsi Company for the past years are as follows (in \$):

| | | | |
|--------|---------|--------|---------|
| 2005 - | 400 000 | 2011 - | 617 000 |
| 2006 - | 440 000 | 2012 - | 654 000 |
| 2007 - | 480 000 | 2013 - | 700 000 |
| 2008 - | 518 000 | 2014 - | 756 000 |
| 2009 - | 554 000 | 2015 - | 824 000 |
| 2010 - | 587 000 | 2016 - | 906 000 |

- i. What is the 2005–2016 compound growth rate? [8]
 ii. Using the result obtained in part a, what is your 2021 projection? [8]
 iii. Demonstrate the difference between qualitative and quantitative forecasting [5]

Question 3

The following relations describe monthly demand and supply for a computer support service catering to small businesses.

$$Q_D = 3\,000 - 10P$$

$$Q_S = -1\,000 + 10P$$

where Q is the number of businesses that need services and P is the monthly fee, in dollars.

- i. At what average monthly fee would demand equal zero? [3]

- ii. At what average monthly fee would supply equal zero? [3]
- iii. What is the equilibrium price/output level? [6]
- iv. Suppose demand increases and leads to a new demand curve:
 $Q_D = 3\,500 - 10P$
 What is the effect on supply? What are the new equilibrium P and Q ? [8]
- v. Suppose new suppliers enter the market due to the increase in demand so the new supply curve is $Q = -500 + 10P$. What are the new equilibrium price and equilibrium quantity? [5]

Question 4

The Economist in your organisation came to your office and said, "The demand and cost estimates that were provided at the meeting are very useful [$Q = 90 - 6.5P$ and $TC = 150 + 3.5Q$]. Unfortunately, what we did not realize at the time was that our fixed costs were underestimated by at least 30 percent. This means that we will have to adjust our price upward by at least 30 percent to cover the added fixed cost. In any case, there is no way in the world that we can survive by charging less than \$9 for our product."

Comment on this statement. Do you agree with the Economist? Explain with an illustration of your answer. [25]

Question 5

- a. What is the source of problem in the prisoner's dilemma game? [6]
- 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 | -300;-300 | 1 000;500 |
| | Strategy B | 500;1 000 | -200;-200 |

- i. Determine the equilibrium of this game, if any. [7]
- ii. How can Munashe ensure that the equilibrium is in his favour? Give examples where possible. [12]

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