



**FACULTY OF MANAGEMENT AND ADMINISTRATION**

**COURSE TITLE: MEC 101 ECONOMICS PRINCIPLES 1**

**SEMESTER 1: FINAL EXAMINATION- NOVEMBER 2013**

**LECTURER: MR T. MASESE**

**TIME: 3 HOURS**

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***INSTRUCTIONS***

Answer **ALL** Questions in this Paper

Total possible mark is **60**.

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Start **each** question on a new page in your answer Booklet.

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The marks allocated to **each** question are shown at the end of the section.

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Show all your workings.

## Question One

- Outline the factors that would bring about a movement along and a shift in the supply curve for an economics textbook **(4 marks)**
- A profit maximizing firm has an average total cost of \$10 but gets a price of \$8 for each good it sells. What would you advise the firm to do if (i) its variable cost is \$9? (ii) if its variable cost is \$7? **(3 marks)**
- Assume that demand for a commodity is represented by the equation  $P = 10 - 0.2Q_d$  and supply by the equation  $P = 2 + 0.2Q_s$ , where  $Q_d$  and  $Q_s$  are quantity demanded and quantity supplied, respectively, and  $P$  is price. Using the equilibrium condition  $Q_s = Q_d$ , solve the equations to determine equilibrium price and equilibrium quantity. Graph the two equations to substantiate your answers **(3 marks)**
- Explain the meaning of the estimates of elasticities in the following table and how the values recorded might be of use to the agricultural industry **(4 marks)**

|                             | <b>Beef</b> | <b>Potatoes</b> | <b>All Food</b> |
|-----------------------------|-------------|-----------------|-----------------|
| Price Elasticity of Demand  | -1.25       | -0.21           | -               |
| Income Elasticity of demand | +0.08       | -0.48           | +0.01           |

- Briefly explain any three determinants of price elasticity of demand of a product **(3 marks)**
- Given the following table on own price and cross elasticity for bread and butternuts, comment on the interpretations of the elasticity values and the factors that can possibly explain each of the values **(3 marks)**

|                   | <b>Bread</b> | <b>Butternuts</b> |
|-------------------|--------------|-------------------|
| <b>Bread</b>      | -0.09        | 0.8               |
| <b>Butternuts</b> | 0.8          | -2.3              |

## Question Two

- Suppose the total demand for wheat and the total supply of wheat per month in the Mutare City grain market are as shown in the following table:

| <b>Demand for wheat (kgs)</b> | <b>Price in \$ per kg</b> | <b>Supply for Wheat (kgs)</b> | <b>Surplus (+) or Shortage (-)</b> |
|-------------------------------|---------------------------|-------------------------------|------------------------------------|
| 85                            | 3.40                      | 72                            | ?                                  |
| 80                            | 3.70                      | 73                            | ?                                  |
| 75                            | 4.00                      | 75                            | ?                                  |
| 70                            | 4.30                      | 77                            | ?                                  |
| 65                            | 4.60                      | 79                            | ?                                  |
| 60                            | 4.90                      | 81                            | ?                                  |

- What is the equilibrium price? What is the equilibrium quantity? Fill in the surplus-shortage column and use it to explain why your answers are correct **(4 marks)**

- ii. Graph the demand for wheat and the supply of wheat. Be sure to label the axes of your graph correctly. Label equilibrium price  $P$  and equilibrium quantity  $Q$ . **(3 marks)**
  - iii. What do economists mean when they say that “price floors and ceilings stifle the rationing function of prices and distort resource allocation”? Suppose that the government establishes a price ceiling of \$3.70 for wheat. What might prompt the government to establish this price ceiling? Explain carefully the main effects. Demonstrate your answer graphically. **(4 marks)**
  - iv. Next, suppose that the government establishes a price floor of \$4.60 for wheat. Why may the government set a price floor for wheat? What will be the main effects of this price floor? Demonstrate your answer graphically. **(3 marks)**
  - v. Calculate the price elasticity of demand when the price increases from \$4.30 to \$4.00. Is demand elastic or inelastic? How does knowledge of elasticity affect your marketing strategy? **(3 marks)**
- b. Timothy and Debra are the only consumers in the market for marinated cricket salad at Africa University and their demand curves are given by  $P = 30 - 2Q_t$  and  $P = 30 - 2Q_d$ . Calculate the market demand curve for marinated cricket salad? **(3 marks)**

### Question Three

- a. Given that mini-bus (kombi) transport industry in Zimbabwe is typically described to be perfectly competitive.
  - i. Briefly outline the main characteristics of a perfectly competitive industry **(4 marks)**
  - ii. With the aid of graphs illustrate a firm making supernormal profits in the short run, one making losses and another in long-run equilibrium in this mini-bus industry **(6 marks)**
- b. Briefly explain 3 sources of economies of scale and one common source of diseconomies of scale as a firm expands its production capacity. **(4 marks)**
- c. Given your knowledge of cost relationships complete the following table **(6 marks)**

| Q  | TC  | FC | VC  | ATC   | AFC | AVC | MC |
|----|-----|----|-----|-------|-----|-----|----|
| 0  | 125 | ?  | ?   | ?     | ?   | ?   | ?  |
| 10 | ?   | ?  | ?   | ?     | ?   | ?   | 5  |
| 20 | ?   | ?  | ?   | 10.50 | ?   | ?   | ?  |
| 30 | ?   | ?  | 110 | ?     | ?   | ?   | ?  |
| 40 | 255 | ?  | ?   | ?     | ?   | ?   | ?  |
| 50 | ?   | ?  | ?   | ?     | ?   | 3   | ?  |
| 60 | ?   | ?  | ?   | ?     | ?   | ?   | 3  |
| 70 | ?   | ?  | ?   | 5     | ?   | ?   | ?  |

|    |   |   |     |   |   |   |   |
|----|---|---|-----|---|---|---|---|
| 80 | ? | ? | 295 | ? | ? | ? | ? |
|----|---|---|-----|---|---|---|---|

**END OF PAPER**