



**FACULTY OF MANAGEMENT AND ADMINISTRATION
CONVENTIONAL PROGRAMME**

COURSE TITLE: MEC 401 – MANAGERIAL ECONOMICS

SEMESTER 1 : FINAL EXAMINATION – NOV/DEC, 2014

LECTURER: MR G. MANDEWO

TIME: 3 HOURS

INSTRUCTIONS

Answer **Question 1** and any other **three questions**.
Total possible mark is **100**.

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

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

Show all your workings.

Credit will be awarded for logical, systematic and neat presentations.

Question 1

- a) Show how you can justify the equimarginal rule as a profit maximisation point. **[5 marks]**
- b) While perfectly competitive markets are ideal for consumers monopolies tend to be favourable arrangements to producers. Discuss this statement. **[5 marks]**
- c) It is a viable business decision to shutdown operations. Explain. **[5 marks]**
- d) Deadweight loss means that the monopoly benefits at the expense of consumers. Say whether this statement is **TRUE/FALSE/UNCERTAIN**. Justify your response. **[5 marks]**
- e) Discuss how you may price jointly produced goods such as hides and beef given that the quantity for the two products is not the same. **[5 marks]**
- f) What is the business trick behind product bundling? Explain with an aid of a diagram. **[5 marks]**
- g) '*Care for the cents and the dollars will care for themselves*' is the lesson behind the relationship among the marginal product, total product and average product. Comment. **[5 marks]**
- h) Using examples of your own choice illustrate how decision sciences are used to enhance managerial economics. **[5 marks]**

Question 2

- (a) Demonstrate two methods you would use to determine the optimal labour input and optimal capital input given a Cobb Douglas production function of the form $Q = 180L^{0.375}K^{0.625}$ And that the wage rate is \$4 per hour and the price of the machine is \$1 per hour. The Total cost is \$10 000.00 Use the Langrangian technique to determine the optimal output, Capital units and Labour units. **[5 marks]**
- (b) Suppose two products A and B are jointly produced, illustrate and explain how a manager can price these goods. **[5 marks]**
- (c) Monopoly production generate a deadweight loss. What do you understand by this concept? **[5 marks]**
- (d) The class president remarked that the 'economic profits Africa University is realizing from its off-campus programs are short lived' Appeal to economic concepts to justify this statement. **[5 marks]**

Question 3

- (a) Illustrate and explain long run profit maximization for a perfectly competitive firm and a monopoly. **[5 marks]**
- (b) Under what circumstances should you defend pure competition as the most efficient market structure? **[5 marks]**
- (c) Fungayi Luxury Airlines have a capacity to carry a maximum of 10 000 passengers per month from Harare to Victoria Falls at a fare of \$500. Variable

costs are \$100 per passenger and fixed costs are \$30 000 per month. How many passengers should be carried per month to break even? **[5 marks]**

(d) A monopolist has production function $Q = L^{0.5}K^{0.5}$. A unit of labour costs $w = 15$ and a unit of capital costs $r = 10$. If the total cost is pegged at \$ 900.00 Use one methods to determine the optimal mix of capital and labour that will maximize output **[5 marks]**

Question 4

(a) Moral hazard concept emanates from the fact that buyers and sellers have different sets of information in terms of product quality, interoperability, durability and design.

State whether this statement is TRUE/FALSE/UNCERTAIN. Justify your response.

[5 marks]

(b) It is better to hang rather than fall. This seems to be the message from the MAXMIN strategy. Demonstrate using a business payoff matrix. **[5 marks]**

(c) Relate the prisoners' dilemma concept to business. **[5 marks]**

(d) Tafadzwa is a known cross boarder vendor. She observed that the demand for white slacks was dependent on the demand for black slacks. She increased the price of white slacks from \$12 to \$15 the demand for black slacks rose from 80 to 120. Calculate, classify, interpret, illustrate and infer the relevant elasticity.

[5 marks]

Question 5

(a) What is the conceptual difference between the linear break even analysis and the generalised one? **[4 marks]**

(b) An EMBA student of managerial economics was presented with three production functions of the form: $Q = \sqrt{K}L^{0.5}$; $Q = K^{0.8}L^{0.5}$ and $Q = K^{0.2}L^{0.1}$. She recommended that these are Cobb Douglas production functions if one wants to double output inputs should be doubled. Authenticate or deny the statement.

What is your recommendation? **[4 marks]**

(c) Demonstrate how the production surface captures the concept of substitutability of factors, returns to scale and the law of diminishing marginal returns **[4 marks]**

(d) In the context of the following Total Cost function

$$TC = Q^3 - 36Q^2 + 100Q + 65$$

i. Explain two methods which can be used to determine the minimum of the average variable cost **[4 marks]**

ii. Using the following definition of the Average cost

$$AC = TC/Q$$

Prove that the marginal cost intersect the average cost at its minimum **[4 marks]**

Question 6

The following pay off matrix captures the possible outcomes for two firms in the same industry. With reference to the pay off matrix below you are required to:

		Firm 2	
		No price change	Price increase
Firm 1	No price change	40; 40	160; , 45
	Price increase	-50, 71	180, 65

- (a) Use a maxmin strategy to determine the ultimate outcome if this game was played in the context of non cooperative games. **[4 marks]**
- (b) Distort the pay off matrix such that there is a dominant strategy. **[4 marks]**
- (c) Sometimes buyers and sellers do not have the same information about a product or a service and this is referred to as information asymmetry. There two problems that emanate from this complex concept, that is, moral hazard and adverse selection.
- The following has been suggested as methods to reduce the effect of post contractual opportunistic behaviour. Warrantee and guarantee. Explain how these instruments work to reduce moral hazard. **[4 marks]**
 - With the aid of a diagram explain the concept of adverse selection. **[4 marks]**
 - Using game theoretic approaches deduce the outcome of this game. **(maxmin strategy may prove handy) [4 marks]**

Question 7

- In what way is a maxmin strategy a valid business strategy? **[You may use a payoff matrix] [4 marks]**
- 'Care for the cents and the dollars will care for themselves'* is the lesson behind the relationship among the marginal product, total product and average product. Comment. **[4 marks]**
- Using examples of your own choice illustrate how decision sciences are used to enhance managerial economics. **[4 marks]**
- If a shop owner has a clear understanding of the concepts of cross elasticity of demand. Show how this can assist her to champion decisions that will enhance profits. **[4 marks]**

- (e) In what way is the direction of causality a critical factor in regression analysis? Explain the possible effects of wrongly determining the direction of causality.
[4 marks]

[END OF PAPER]