

# **Assignment A (Microeconomics)**

**Semester 2, 2014**

**Business Economics BUECO5903**

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## **Instructions for Candidates:**

- 1. Choose any five (5) of the following nine (9) questions;**
- 2. Each question is worth ten (10) marks;**
- 3. This assignment comprises 10 per cent of total assessment;**
- 4. Please type your assignment;**
- 5. All diagrams and direct quotations must be referenced as per the course description specified method.**
- 6. Please use the numbering system as provided on this document to identify the questions.**

**Question 1:**

- (a) Illustrate and explain using a diagram how a firms fail to achieve allocative efficiency within the following market structures:
- (i) Monopolistic competition (short run); **(2.5 marks)**
  - (ii) Monopolistic competition (long run); **(2.5 marks)**
  - (iii) A very small number of firms that have decided to collude; **(2.5 marks)**
- (b) Illustrate and explain using a diagram, what happens when one of the firms in Part (a) (iii) decides to cheat by increasing its output. **(2.5 marks)**

**Question 2:**

- (a) Assuming a constant wage rate, illustrate and explain using a diagram, how a firm's marginal costs of production are at a minimum when its marginal product is at a maximum;  
**(2.5 marks for the diagram plus 2.5 marks for the explanation)**
- (b) Illustrate and explain using a diagram how a firm's long-run average cost curve comes into existence from a multi-plant operation;  
**(2.0 marks for the diagram plus 2.0 marks for the explanation)**
- (c) Identify and describe the significance of the various portions of this diagram. **(1 mark)**

**Question 3: (2 diagrams at 2.5 marks each plus 2 explanations at 2.5 marks each)**

Illustrate and explain using diagrams either:

Two (2) market mechanisms that are used for controlling pollution as an externality

**OR ALTERNATIVELY**

The impact of external costs and external benefits on resource allocation

**Question 4:**

- (a) Explain why you agree or disagree with the following statement:  
"When marginal revenue equals marginal cost, total cost equals total revenue and the firm makes zero profit".  
**(5 marks)**

- (b) Explain whether you agree or disagree with the following statement and why:

“Regardless of whether the short run or the long run is being considered, a firm should continue to operate as long as its price is greater than its average variable cost”.

**(5 marks)**

**Question 5:**

- (a) Illustrate and explain using diagrams, the difference between long run supply in a constant cost individual firm and industry and an decreasing cost firm and industry.

**(Firm level diagrams 2.5 marks; industry level diagrams 2.5 marks, firm level explanation 2.5 marks, industry level explanation 2.5 diagrams)**

**Question 6:**

- (a) Suppose the income elasticity of demand for pre-recorded music compact disks is +6 and the income elasticity of demand for a cabinet maker’s work is +0.6. Compare the impact on pre-recorded music compact disks and the cabinet maker’s work of an economic expansion that increases consumer incomes by 20 per cent. **(2 marks)**
- (b) How might you determine whether the pre-recorded music compact discs and MP3 music players are in competition with each other? **(2 marks)**
- (c) Interpret the following Income Elasticities of Demand (YED) values for the following and state if the good is normal or inferior; **(3 marks total, 1.5 marks per part)**

YED= +0.4 and YED= -3.4

- (d) Interpret the following Cross-Price Elasticities of Demand (XED) and explain the relationship between these goods. **(3 marks total, 1.5 marks per part)**

XED= + 0.62 and XED= -3.2

**Question 7:**

You are given the following data about two firms:

FIRM A

Quantity	0	1	2	3	4	5	6
Total revenue (\$)	0	10	20	30	40	50	60
Average revenue (\$)	—	—	—	—	—	—	—
Marginal revenue (\$)	—	—	—	—	—	—	—

Total cost (\$)	30	42	50	60	76	100	140
Marginal cost (\$)	—	—	—	—	—	—	—
Average cost (\$)	∞	—	—	—	—	—	—

**FIRM B**

Quantity	0	1	2	3	4	5	6
Total cost (\$)	100	134	154	177	216	266	366
Average cost (\$)	∞	—	—	—	—	—	—
Marginal cost (\$)	—	—	—	—	—	—	—
Price (\$)	140	130	120	110	100	90	80
Marginal revenue (\$)	—	—	—	—	—	—	—
Total revenue (\$)	—	—	—	—	—	—	—

- (a) Complete the two tables above. **(4 marks)**
- (b) Are these firms operating in the short or the long run? **(1 mark)**  
 Firm A: *short run / long run*  
 Firm B: *short run / long run*
- (c) Are these firms operating under perfect or imperfect competition? **(1 mark)**  
 Firm A: *perfect / imperfect*  
 Firm B: *perfect / imperfect*
- (d) What level of output will these firms produce in the short run? **(2 marks)**  
 Firm A: .....  
 Firm B: .....
- (e) How would you describe their profit positions? **(2 marks)**  
 Firm A: .....  
 Firm B: .....

**Question 8:**

- (a) You run a monopoly maker and supplier of a particular good. Explain and illustrate using a diagram why you should not produce in the inelastic range of the demand curve. **(3 marks for diagram plus 3 marks for explanation)**
- (b) In each of the following cases, state whether the monopolist would increase or decrease output:
- (i) Marginal revenue exceeds marginal cost at the output produced; **(2 marks)**
- (ii) Marginal cost exceeds marginal revenue at the output produced. **(2 marks)**

**Question 9:**

**(2 marks each. That is 1 mark for the explanation and 1 mark for the diagram)**

Using supply and demand analysis, explain and illustrate graphically, the effect of the following situations:

- (a) Population growth surges rapidly;
- (b) The prices of resources used in the production of good X increases;
- (c) The government is paying A \$4 per unit subsidy for each unit of good Y produced;
- (d) The income of consumers of normal good X decreases;
- (e) The income of consumers of inferior good Y increases.