Uganda Martyrs University
Final Examination
Managerial Economics I
BAM I
December 11, 2012

Answer 4 Questions   Time allowed 3 Hrs

(1)   Given that a change in the price of good Y from $10 to $20 is associated with a change in the quantity consumed by an individual of another good X from 20 to 15 units. Compute the cross elasticity of demand ϵ_{XY} and give an appropriate interpretation. Then,
   (i)   Explain the meaning of the cross elasticity of $\epsilon_{XY} < 0$ and $\epsilon_{XY} > 0$;
   (ii)   Interpret the relationship between X and Y when: $|\epsilon_{XY}| = 0$; $|\epsilon_{XY}| < 1$; and $|\epsilon_{XY}| > 1$.

(2)   Explain the following concepts:
   (i)   Productivity (5 Marks)
   (ii)   Technical Efficiency (5 Marks)
   (iii)   Economic Efficiency (5 Marks)
   (iv)   Producer surplus (5 Marks)
   (v)   Expansion path (5 Marks)

(3)   Explain the term MARKET STRUCTURE and outline the criteria for determining the structure of a market (10 Marks). Why is market structure an important issue in business? (5 Marks). Point out the advantages and beneficial effects believed to be associated with a perfectly competitive market model giving examples. (10 Marks)

(4)   Explain the concepts ECONOMIC PROFIT, FIXED COSTS and VARIABLE COSTS (10 Marks) and with good reasons and appropriate illustrations, explain:
   (a)   When a firm should go into production (5 Marks)
   (b)   The level of output the firm should produce to maximize profit (5 Marks)
   (c)   The pure economic profit made by a firm operating in a perfectly competitive market; (2 Marks)
   (d)   The loss made by a firm minimizing losses in monopolistic competition market. (3 Marks)

(5)   Explain and with appropriate illustrations, fully distinguish between the concepts of DIMINISHING RETURNS to a factor and DECREASING RETURNS TO SCALE while accounting for the underlying factors and their economic relevance.(25 Marks)

(6)   Considering the case of a firm that is minimizing losses in the short-run and another that is making pure economic profit in the short-run, logically predict the long-run equilibrium of a firm operating in a perfectly competitive market. (25 Marks)

(7)   Sketch and explain the relationship between Marginal Cost, Average Total Cost (ATC), Average Variable Cost (AVC) and Average Fixed Cost (AFC). Then:

     i. Explain why the Total Variable Curve (TVC) and Marginal Cost (MC) curves have inverse "S" and "U" shapes respectively?

     ii. For the data below, calculate; Marginal Cost (MC), Total Costs (TC), Average Variable Costs(AVC), Average Fixed Costs(AFC) and Average Total Costs(ATC).

Output (Q)	FC	VC	TC	ATC	AFC	AVC	MC
0	40	0					
1		25					
2		35					
3		50					
4		60					
5		76					
6		90					
7		115					
8		140					

(8)   Given a firm sells its output for $20 per unit and has a total cost function given by $TC = 20 + 17Q - 9Q^2 + Q^3$.

     (i)   Sketch and explain the shape of the TC function (3 Marks)

     (ii)   State the firm's fixed cost (2 Marks)

     (iii)   Obtain the firm's variable cost function (2 Marks)

     (iv)   Obtain the firm's average total cost function (3 Marks)

     (v)   State the firm's profit function (5 Marks)

     (vi)   Obtain the firm's marginal cost function (10 Marks)

Blessings