



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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CITY CAMPUS

MAIN EXAMINATION

MAY - JULY 2013 TRIMESTER

FACULTY OF COMMERCE

DEPARTMENT OF MARKETING AND MANAGEMENT

EVENING PROGRAMME

CEC 520: MANAGERIAL ECONOMICS

DATE: July 2013	DURATION: 3 Hours
INSTRUCTIONS: Answer ALL the Questions	

- Q1. a) Explain in detail the “entry/mobility and exist conditions” as one of the factors that shape competitive environment. **(4 marks)**
- b) When the level of risk and attitude towards risk taking are known, the effects of uncertainty can be directly reflected in the basic valuation model of the firm. Explain in detail this statement. **(4 marks)**
- c) Suppose Tax Advisers, Inc. has an office for processing returns in Thika and it employs one certified public accountant (CPA), it can process 0.2 tax returns per hour. Adding a second CPA increases production to 1 return per hour, and with a third, output prints to 2.4 returns processed per hour. Complete the following table:

Units of labour input employed (CPAs) = Q)	Total of CPAs – Tax returns processed per hour (TP _{CPA})	Marginal product of CPAs ($MP_{CPA} = \frac{TP_{CPA}}{\partial Q}$)	Average product of CPAs $AP_{CPA} = \frac{TP_{CPA}}{Q}$
1	0.2		
2	1.0		
3	2.4		
4	2.8		
5	3.0		
6			

(2 marks)

- d) Explain clearly the relation between the demand curve and demand function. **(5 marks)**

- Q2. a) Distinguish clearly between the terms 'business profit' and 'economic profit'. **(2 marks)**
- b) Explain briefly two key importances of the expected value maximization model (or maximizing equation) of the firm. **(4 marks)**
- c) Using suitable illustration, explain briefly the following terms:
- i) A surplus
 - ii) A shortage
 - iii) Market equilibrium
 - iv) Market disequilibrium **(5 marks)**
- d) Explain briefly **two** models that form the basis of demand. **(4 marks)**

- Q3. a) The management of Deri passage transport company is interested in analyzing ticket demand. The monthly data for the year suggests the following demand function:

$$Q = 4,000 - 2,500P + 3,000P_c + 150I + 1,000A$$

Where

Q = Quantity of passenger transport tickets.

P = Average price (in \$)

P_c = Ticket price in competing firms

I = Average disposable income per household (in '000s \$)

A = Monthly advertising expenditures (in '000s \$)

Suppose

$$P_c = \$4$$

$$I = \$ 6,000$$

$$A = \$ 20,000$$

Required to:

- i) Derive the passenger ticket demand curve. **(1 mark)**
 - ii) Compute the point price elasticity of ticket demand when:
 - I) $P = \$10$
 - II) $P = \$15$ **(1 mark)**
 - iii) Interpret results in (ii) above. **(1 mark)**
 - iv) Analyze and interpret the sensitivity of quantity of passenger ticket demand to price changes over the range of prices in (ii) above. **(2 marks)**
- b) Explain briefly the following terms:
- i) Returns to scale of a productions system. **(1 mark)**
 - ii) Returns to scale to a factor of production. **(1 mark)**

- c) Using suitable examples and illustrations explain briefly the term 'input substitution'. **(3 marks)**
- d) State two common specifications of regression model. **(1 mark)**
- e) State the steps in regression analysis. **(3 marks)**
- Q4. a) In forecasting procedures state the most commonly applied forecasting techniques. **(2 marks)**
- b) Using suitable illustrations indicate the basic time series characteristics. **(4 marks)**
- c) Using suitable illustration explain briefly the effect of transportation costs on optimal plant size. **(4 marks)**
- d) The following table presents a production function for a two – input and one – output system. The inputs are labour (X) and capital (Y). Thus, $A = f(x, y)$

Units of capital (Y)	Output Quantity (Q)									
	10	52	71	87	101	113	122	127	129	130
9	56	74	89	102	111	120	125	127	128	129
8	59	75	91	99	108	117	122	124	125	126
7	61	77	87	96	104	112	117	120	121	122
6	62	72	82	91	99	107	111	114	116	117
5	55	66	75	84	92	99	104	107	109	110
4	47	58	68	77	85	91	97	100	102	103
3	35	49	59	68	76	83	89	91	90	89
2	15	31	48	59	68	72	73	72	70	67
1	5	12	35	48	56	55	53	50	46	40
Units of labour (X)	1	2	3	4	5	6	7	8	9	10

- i) Given, $Q = f(X/Y = 7)$, derive:
- I) The short-run production function i.e total product. Show graphical presentation.
- II) The marginal product and average product. show graphical presentation. **(3 marks)**
- ii) Given the isoquants $Q_1 = 99$ and $Q_2 = 122$. Provide the input combinations for each isoquant. Present results graphically. **(2 marks)**

END