UGANDA MARTYRS UNIVERSITY

FACULTY OF SCIENCE

DEPARTMENT OF ECONOMICS

UNIVERSITY EXAMINATIONS
SEMESTER I, 2012/13

SECOND YEAR EXAMINATIONS FOR BACHELOR OF SCIENCE
(FM, B.ECON & GEN)

MICROECONOMICS II

12TH
DATE: 13TH DECEMBER 2012

TIME: 2:00 – 5:00 PM

Instructions:

i) Read the question paper carefully.
*ii) Answer only **FOUR (4)** questions.*
iii) All questions carry equal marks.
iv Use of relevant illustrations will be credited

Question One

(a) Describe the Ordinal utility approach to consumer's behavior and the assumptions on which it is based. **(10 Marks)**

(b) If the consumer's utility function is given as **$U = u(X, Y)$** subject the fixed budget **$B = P_xX + P_yY$**; show that the consumer maximizes his utility when the ratio of marginal utilities is equal to the price ratio of products X and Y; assuming that his budget (**B**), prices **P_x** for X and **P_y** for Y are all fixed. **(10 Marks)**

(c) Explain the concept of *price consumption curve* and illustrate how it is applied in deriving a normal demand curve. **(5 marks)**

Question Two

(a) Using the market theory of demand, explain factors behind the increasing demand for Education in East African region yet its average price is relatively high. **(10 Marks)**

(b) If **$P = 40 - 2Q_d$** and **$P = 10 + Q_s$** are demand and supply functions of a given product in market led economy:

i. Find the market equilibrium price and quantity of the product. **(5 Marks)**

ii. Find price elasticity of demand for the product at equilibrium point. **(4 Marks)**

iii. Determine the values of consumer's surplus and producer's surplus. **(6 Marks)**

Question Three

(a) Describe the concept of "price elasticity of demand" and discuss its application in economic and business management. **(10 Marks)**

(b) Given that Total Revenue TR = PQ. Show that Marginal Revenue

$MR = P(1 - 1/\mathcal{E}_p)$ where $\mathcal{E}_p$ is the price elasticity of demand for the product and explain how revenue changes with elasticity of demand ($\mathcal{E}_p$). **(10 Marks)**

(c) Explain why the monopoly market has a price-inelastic demand. **(5 Marks)**

Question Four

(a) Briefly explain the concepts of an Iso-quant and marginal rate of technical substitution. **(5Marks)**

(b) If output function is express as $Q = q(K,L)$, show that the producer maximizes output (Q) when **$MP_L/MP_K = P_L/P_K$** , assuming a given expenditure(B) on capital(K) and labor (L) with fixed prices **P_K** and **P_L** respectively. **(10Marks)**

(b) Using evidence from East African region, discuss the factors behind the poor performance of most firms operating within this region. **(10 Marks)**

Question Five

(a) State the common set objectives of most private and public sector firms **(7 Marks)**

(b) Using the theory of profit maximization, show that the firm maximizes profits at an output level where the firm's marginal revenue (MR) equals to its marginal cost (MC)

(4 Marks)

(c) Given that total revenue(TR) and total cost(TC) are functions of output (Q) such that $\mathbf{TR=600Q-3Q^2}$ and $\mathbf{TC=1000+100Q+2Q^2}$, determine the following:

(i) The value of supplementary costs **(2Marks)**

(ii) The expressions for marginal revenue (MR), marginal cost (MC) and average revenue (AR).

(6Marks)

(iii) The output level at which profits are maximized. Hence compute the maximum profits.

(6 Marks)

Question Six

(a) Describe the structure-conduct performance model as applied in market structure analysis.

(5 marks)

(b) Using at least one example in Uganda, describe a monopoly market structure and state the sources of monopoly power in an economy. **(10Marks)**

(c) Discuss the importance of using price discrimination in business operations.

(10Marks)

END