

Uganda Martyrs University
Faculty of Science
Advanced Microeconomics
BSc Gen & B.Econ 3 Semester 1 Final Assessment Examinations
2007/2008

Date: 12/12/2007

Duration: 3 Hours

Instructions:

Answer four (4) questions

Answers must be precise and clear

- 1 (a) Explain the various axioms of consumer behaviour (10 marks)
(b) Derive and explain the shape and nature of an indifference curve using the revealed preference hypothesis (15 marks)
- 2 (a) Suppose a consumer is faced with n commodities $X_1=X_1, X_2, \dots X_n$, purchased at market prices $P_1, P_2, \dots P_n$.
The consumer has money income Y; explain the consumer's utility maximizing Condition. (11 marks)

(b) Given that a consumer is aiming at maximizing utility $U = x^\alpha y^\beta$ but constrained with a budget $M = P_x X + P_y Y$, desire
 - i) the ordinary demand curves (11 marks)
 - ii) the optimal utility for the consumer (3 marks)
- 3) Isolate and explain the income effect from the substitution effect of a price fall using the following techniques:
 - i) equivalent variation (9 marks)
 - ii) compensation variation (9 marks)
 - iii) cost-difference (7 marks)
- 4) (a) Explain the various ways through which a firm can grow.

(b) Why do firms integrate the various stages of their operation? (6 marks)

(c) Discuss the various methods that are employed in measuring vertical integration (19 marks)
- 5) (a) Distinguish between first degree and second degree price discrimination (4 marks)

(b) Assume a monopolistic firm producing shoes but facing this demand functions $Q_1=32, 4P$ and $Q_2=18-0.1P_2$ because of the separated markets.

If this firm is facing a total cost function $C=40+40Q$, where $Q=Q_1+Q_2$. Find,
 - i) The monopolistic profit maximizing level of output, price and profit without price discrimination (6 marks)

- ii) The monopolistic profit maximizing output levels, prices and profits with price discrimination (11 marks)
 - iii) Determine the price elasticities of demand in the two markets (4 marks)
- 6) (a) What is an oligopoly market (1 mark)
- (b) Given the demand and cost functions of the duopolist as
 $P=100-0.5(q_1 + q_2)$ $C_1=5q_1$, $C_2=0.5q_2^2$, $MC_1=5$, $MC_2=q_2$
 - i) What are the price functions for firms 1&2, price and profit levels? (12 marks)
 - ii) In case of collusion, what are the profit maximization levels for firm 1, firm 2 and aggregate profits for the whole industry? (12 marks)
- 7 (a) Distinguish between pure goods, club goods and congestible public goods (6 marks)
- (b) Explain how the existence of externalities in an economy can affect resource allocation (6 marks)
- (c) Derive and explain the Merlove's adjustment principle (13 marks)

GOOD LUCK