



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
FOURTH YEAR FIRST SEMESTER**

SCHOOL OF BUSINESS & ECONOMICS

**BACHELOR OF SCIENCE IN ECONOMICS
BACHELOR OF SCIENCE IN FINANCIAL
ECONOMICS
BACHELOR OF SCIENCE IN ECONOMICS &
STATISTICS**

COURSE CODE: ECO 3103

COURSE TITLE: ADVANCED MICROECONOMICS

DATE: 6TH DECEMBER 2018

TIME: 0830 – 1030HRS

INSTRUCTIONS TO CANDIDATES

Answer Question **ONE** and any other **THREE** questions

QUESTION ONE

- (a) Using game theoretic approach and given that the inverse demand function is $P=a-q_A+q_B$.
- (i) Show that a firm that first enters the market will always have a larger market share. **(4marks)**
 - (ii) What is the market price? **(2marks)**
 - (iii) What is the profit for the leader and follower? **(2marks)**
 - (iv) What is the industry profit? **(1mark)**
 - (v) What assumption have you made in (i) above? **(2marks)**
- (b)
- (i) Show that trade in a perfectly competitive market will always be a market Pareto efficient. **(6marks)**
 - (ii) Discuss the second theorem of welfare economics **(4marks)**
 - (iii) What are the policy implications of the second theorem of welfare economics **(4marks)**

QUESTION TWO

- (a) Prove that expenditure functions are concave in price. **(3marks)**
- (b) Given a Cobb-Douglas utility function $u(x_1, x_2) = x_1^{0.5} x_2^{0.5}$.
- (i) Determine the Marshallian demand functions. **(4marks)**
 - (ii) The Hicksian demand functions. **(4marks)**
 - (b) Determine the Slutsky equation. **(4marks)**

QUESTION THREE

- (a) Show that the effect of an income tax that raises same amount of revenue as excise tax will always achieve a higher level of utility than excise tax. **(5marks)**
- (b) Suppose initially a consumer has an income $M^0=100$ and faces the following prices of good x_1 and x_2 : $P_1^0=P_2^0=1$, and $e(p,u) = P_1^{0.5} P_2^{0.5} U$. If the government imposes a tax on the good x_1 so that P_1 rises to $P_1^1=4$. What amount of additional income would be needed to compensate the consumer so that he remains on the same level of utility as before the imposition of the tax? **(4marks)**

- (c) “Asymmetric information is considered to be one of the causes of market failure”. Using a relevant example, Discuss. **(6marks)**

QUESTION FOUR

- (a) By an illustration, discuss the tragedy of the commons. **(4marks)**
- (b) Distinguish between adverse selection and moral hazard **(4marks)**
- (c) A risk-averse individual is offered a choice between a gamble that pays Sh1000 with a probability of 25% and Sh100 with a probability of 75%, or a payment of Sh325. Which would he choose? **(3marks)**
- (d) Draw a utility function that exhibits risk-loving behavior for small gambles and risk-averse behavior for large gamble. **(4marks)**

QUESTION FIVE

- (a) Given a cost function $C(w,y)=2W_1^{0.5}W_2^{0.5}Y^{0.5}$.
- (i) Determine the conditional input demand functions. **(2marks)**
- (ii) Input demand function. **(2marks)**
- (iii) Output supply function. **(1marks)**
- (iv) Associated output function. **(1mark)**
- (b) Find the cost function $C(w,y)$, given that $Y=\min\{x_1/a_1, x_2/a_2\}$. **(3marks)**
- (c) Explain the concept of signaling. **(3marks)**
- (d) If a stock has a β of 1.5, the return on the market is 10%, and the risk free rate of return is 5%, what expected rate of the return should this stock offer according to the capital asset pricing model? **(3marks)**

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