



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR BACHELOR OF
ECONOMICS AND FINANCE

EET 300: MICROECONOMICS THEORY III

DATE: 29/5/2017

TIME: 2:00 – 4:00 PM

INSTRUCTIONS:

Answer question ONE and any other two question

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Discuss some of the properties of the production function (10 marks)
- b) Differentiate Hicksian compensation and Slutskys compensation function (4 marks)
- c) The consumer with the utility function below seeks to maximize utility subject to the budget constraint.

$$\max u = x_1 x_2$$

st

$$p_1 x_1 + p_2 x_2 = M$$

Derive the marshallian demand function and state their properties (8 marks)

- d) With use of illustrations of examples, discuss the properties of the profit function (8 marks)

QUESTION TWO (20 MARKS)

- a) Describe various types of production function (9 marks)
- b) Explain the Advantage of constant elasticity of substitution function over *generalized power function*: (2 marks)
- c) Using a relevant examples and illustrations differentiate between these types of markets; leadership model, Cournot equilibrium and Bertrand competition. (9 marks)

QUESTION THREE (20 MARKS)

- a) Given the following production function below and different assumptions about ℓ , the C.E.S can collapse into any of the specific forms of production functions explain these assumptions with illustrations?

$$Q = A(\alpha L^{-\ell} + \beta K^{-\ell})^{-\frac{1}{\ell}} \quad (12 \text{ marks})$$

- b) Given the following demand function $Q = 10 - 2P$ and cost function $MC = 10$. Compare the quantity, price and profit under the monopoly and competitive market. (8 marks)

QUESTION FOUR (20 MARKS)

- a) The firm seeks the minimum cost of producing the level of output y . Derive the cost function

$$\min C = wL + rK$$

s.t

$$y = AL^{\alpha} K^{1-\alpha} \quad (12 \text{ marks})$$

- b) Using the expenditure function of your choice, describe its properties (8 marks)

QUESTION FIVE (20 MARKS)

- a) Given a production function $y = f(x_1, x_2)$, x_1 and x_2 are two inputs, derive the maximum profit for the firm (10 marks)
- b) The cost function is expressed as a function of input prices and output, with use of illustrations describe its properties (10 marks)