UNIVERSITY OF SWAZILAND

FACULTY OF SOCIAL SCIENCE

DEPARTMENT OF ECONOMICS

SUPPLEMENTARY EXAMINATION

JULY 2017

TITLE OF PAPER: MICROECONOMICS

COURSE CODE: IDE-ECON201

TIME ALLOWED: THREE (3) HOURS

INSTRUCTION: ANSWER QUESTION 1 (ONE) AND ANY OTHER **TWO** QUESTIONS

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Question 1 Compulsory (40 marks)

a) Assuming a price increase for a normal good, describe the income and substitution effects. Outline the overall effect. Do not use a graph. (10 marks)

b) Using the information given below, derive the compensated demand and Marshallian demand functions; $U = 2XY \; subject \; to \; 100 = 4X + 2Y$. From the solution what do you observe? Explain. (15 marks)

c) Discuss in detail, using graphs and equations, the properties of indifference curves, compensated demand and Marshallian demand functions and iso-product curves. (15 marks)

ANSWER ANY TWO QUESTIONS FROM THE FOLLOWING:

Question 2

Demand curve for a Monopolist is $X = 50 - 0.5P \; and \; the \; cost \; function \; is \; C = 50 + 40X$. The Monopolist seeks to maximise profit given by $\pi = R - C$.

a) Find MR and MC. (10 marks)

b) Find the optimal X and profit. (5 marks)

c) Show that the profit calculated in part b) above is the maximum profit possible for the Monopolist. (5 marks)

d) Outline the various causes of Monopolies. Use examples from Swaziland where applicable (10marks)

Question 3

a) Explain the concepts of economies and diseconomies of scale. State the formula used to calculate these as well as the rule of thumb used. (10 marks)

b) Use a graph to explain plant capacity. (5 marks)

c) Minimise $C = 5L + 3K \; subject \; to \; Q = KL$ and find the following:
   (i) Optimal L and K. (7 marks)
   (ii) Level of output that minimises costs. (4 marks)
   (iii) Minimum cost. (4 marks)

Question 4

a) Given the following production function; $Q = 3K^{0.8}L^{0.6}$, determine the returns to scale. Assume that inputs are doubled. (5 marks)

b) Under perfect competition the firm aims to maximise profit given by $\pi = R - C$. Find the two conditions for profit maximisation. (10 marks)

c) Explain why isoquants and indifference curves slope downwards and are convex to the origin. (10 marks)

d) Using an example explain economies of scope. (5 marks)