UNIVERSITY OF SWAZILAND

DEPARTMENT OF ECONOMICS

FINAL EXAMINATION 2010/2011

TITLE OF PAPER	:	**MICROECONOMICS**
COURSE CODE	:	**ECON 201(FT)/ECON 201(IDE)**
INSTRUCTIONS	:	**1. ANSWER QUESTION ONE AND ANY OTHER QUESTION IN SECTION A.**
		2. ANSWER QUESTION FOUR AND ANY OTHER QUESTION IN SECTION B
		3. DECIMAL NUMBERS ARE TO BE ROUNDED TO TWO(2) DECIMAL PLACES
TIME ALLOWED	:	**THREE (3) HOURS**

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SECTION A

ANSWER QUESTION ONE AND ANY OTHER QUESTION IN THIS SECTION

QUESTION ONE (COMPULSORY) – 30 MARKS

A) Discuss three (3) features/properties of indifference curves and link them to the assumptions of a rational consumer. [6 marks]

B) Write short explanatory notes on the following concepts and provide sketches where necessary.

i) The Law of Returns to Scale [8 marks]

ii) The Law of Diminishing Marginal Returns of a factor input [8 marks]

C) Average costs in the short run will exceed average costs in the long run. Using a suitable diagram, explain this concept. [8 marks]

QUESTION TWO – 20 MARKS

The utility of Sibusiso an ECON 201 student can be determined by the following utility function: $U = 2X^{0.25}Y^{0.5}$,

Where:

X = Amount of Good X consumed

Y = Amount of Good Y consumed

U = Sibusiso's utility from the consumption of Good X and Good Y.

a) If the price of Good X is indicated by P_x and the price of Good Y indicated by P_y, and Sibusiso's income is indicated by M, then:

i) Set up the Lagrangian function based on the above information [2 marks]

ii) Obtain the first order conditions for utility subject to the income constraint. [3 marks]

iii) Derive the optimum input combinations. [6 marks]

b) If P_x = E20, P_y = E10 and M = E600.

i) Calculate Sibusiso's optimum consumption of Goods X and Y. [3 marks]

ii) What is the optimum utility level? [2 marks]

iii) Provide a sketch for Sibusiso's optimal level of utility. [4 marks]

QUESTION THREE – 20 MARKS

A) Explain and diagrammatical decompose the effect of a **price increase** into the income and substitution effects, for a **Giffen** good. [10 marks]

B) Given the following market demand and supply functions:

$$Q_d = 52 - 2P$$
$$5P - Q_s = 25$$

Where Q_d = quantity demanded

Q_s = quantity supplied

P = price

i) Determine the equilibrium price and quantity for the market. [4 marks]

ii) Explain and diagrammatically illustrate that the solution you obtained above is a stable equilibrium. [6 marks]

SECTION B

ANSWER QUESTION FOUR AND ANY OTHER QUESTION IN THIS SECTION

QUESTION FOUR (COMPULSORY) – 30 MARKS

A) Explain and illustrate the shut down decision of a perfectly competitive firm in the short run. [7 marks]

B) The long run market/industry supply curve of a perfectly competitive firm depends on the cost structure of the particular market. Using a suitable graph, illustrate and explain the long run supply curve for a decreasing cost market. [7 marks]

C) Show the welfare effects of a Monopoly firm that is taken over by a competitive firm. [10 marks]

D) Distinguish between first degree, second degree and third degree price discrimination. [6 marks]

QUESTION FIVE – 20 MARKS

a) Using suitable graphs, determine how price and output is determined in a Cournot Oligopoly model. (Assume a duopoly market) [10marks]

b) Algebraically derive the Cournot equilibrium price and quantity. Assume that all the firms have zero marginal costs. [10 marks]

QUESTION SIX – 20 MARKS

A monopoly firm sells its product in two countries, and re-sales between the countries are impossible. The demand curves in the countries are:

Market 1: $\boldsymbol{Q_1 = 100 - P_1}$

Market 2: $\boldsymbol{Q_2 = 60 - \frac{1}{2}P_2}$

The Total Cost (TC) function for the firm is: $\boldsymbol{TC = 300 + 30Q}$

Where $\boldsymbol{Q = Q_1 + Q_2}$

i) Calculate the price that the firm should charge and the quantity it should supply in each country. [8 marks]

ii) What would be the equilibrium price and quantity if the firm charges a single price in both countries? [6 marks]

iii) What policy can you recommend to the firm, price discrimination or non price discrimination? [6 marks]

"ALL THE BEST"