Practise Midterm ECON 301

PART ONE: True/False/Explain: do 8 of 10 questions (5 marks each)

[1] Consider two different welfare policies: a per unit subsidy on good x or a lump sum grant to all consumers. If both programs leave the consumer equally as well off, the first program is always less expensive than the second

[2] If the price of x falls and the consumption of x remains at the same level as before the price fall, then x is neither a normal good or an inferior good.

[3] Suppose an individual consumes only two goods, x and y. If the price of x rises, with all else held constant, and the price elasticity of demand for x is 1.5, then the quantity of y consumed will increase.

[4] While high fixed costs can lead to pure economic losses, they are never a reason to shut down.

[5] Suppose the demand curve for Nintendo video cartridges is given by the equation $p = 20 - 0.5q$. If the nintendo machine that runs the cartridges costs \$40 to produce and each cartridge costs \$2 to produce, then the maximum profit earned by Nintendo using a two part pricing scheme is \$324.

[6] The price of x is \$1 and the price of y is \$2. An individual with a fixed money income consumes 10 units of each in equilibrium. If the price of x increases to \$2 and the price of y increases to \$3 while her money income increases to \$50, her consumption of y will not fall.

[7] The production of y is a function of two inputs, z_1 and z_2, and the production function is $y = z_1 z_2^2$. If the input price for z_1 is equal to the input price for z_2, then, to minimize costs, the firm will use equal quantities of both inputs.

[8] The slope of the total cost curve equals the slope of the total variable cost curve at every level of output.

[9] To minimize the cost of producing a given quantity of output, the input bundle *must* be chosen so that the marginal products of all inputs are identical

[10] If a competitive firm is maximizing average (per unit) profit, the firm *must* be maximizing its total profit.

PART TWO: Do Two of the following (10 marks each)

[11] Brett lives in a two good world consisting of x and y. Brett has a budget of $B = 120$ and an endowment of good x equal to 90 units. Brett can either buy or sell good x in a common market for the price p_x. The price of y is 1. Brett's utility function is of the form

$$U(x, y) = (xy)^{1/2}$$

(a) Write down Brett's budget constraint.

(b) Find expressions for Brett's demand functions for x and y.

(c) At what values of p_x is Brett a net buyer of good x, at what values is he a net seller, and at what price does Brett's demand for x just equal his endowment?

[**12**] Leisure Suit Larry visits Helsinki where he can consume only two goods, x and y. He has a budget of M and faces prices p_x and p_y respectively.

His utility function is: $U = A(xy)^{1/2}$ where A is a constant.

(a) Derive an equation for Larry's demand curve for x.

let $M = 120$, $p_x = 3$ and $p_y = 1$.

(b) Calculate his cross elasticity of demand for x with respect to the price of y and calculate his income elasticity of demand for x.

(c) Larry is invited to join the Hulla Kukka club, for dues of 40 per week, which would allow him to purchase x at a price of 1. Will Larry join the Hulla Kukka club?

(d) What is the largest dues that Larry would be willing to pay to join the Hulla Kukka club?