Uva Wellassa University
Faculty of Animal Science and Export Agriculture
BSc in Export Agriculture
Bachelor of Animal Science
BSc in Tea Technology and Value Addition
BSc in Palm and Latex Technology and Value Addition

End Semester Examination – September/October 2012
Year II Semester II

Economic Thinking in Agriculture (EAG 221-3/0)

Instructions

Answer **only five (5)** questions selecting **three (3) questions** from **part one (I)** and **two (2) questions** from **part two (II)**

No. of questions : Seven (07)
No. of pages : Four (04)
Time : Three hours (3 hrs)
Total marks allocated : 40/100

Part I

1.
   a. What are the basic assumptions of a perfectly competitive market?
   b. Graphically show the short run and long run equilibrium conditions of a perfectly competitive firm
   c. A firm's average cost function (where **AC** is average cost in dollars and q is quantity) is $AC = 200/q + 4 + 2q$
      i. If the firm is perfectly competitive and if the price of its product is $24, what is its optimal output rate?
      ii. At this output rate, what are its profits?
      iii. Derive the firm's short – run supply curve

2.
   a. Discuss the meaning of the production function. What is the short-run and what is the long-run. How does the production function in the short-run differ from that in the long-run?
   b. Following table shows the amount of rice production with the application of successive doses of Nitrogen fertilizer

Nitrogen kg/ha	Rice yield kg/ha
0	15
30	25
60	45
90	70
120	85
150	85
180	75

i. Calculate Average Product and Marginal Product at each Nitrogen level

ii. If the price of 1 kg of rice is 20 Rs. and price of 1 kg of Nitrogen fertilizer is 10 Rs. Calculate

A. MR

B. AR

C. TR

D. TC

E. Net Revenue

3.

a. Briefly explain the demand shifters

b. The demand function and supply function of potato in domestic market of Sri Lanka were estimated as

$$P = -2Q_D + 50$$

$$P = \tfrac{1}{2}Q_S + 25$$

$where; Q = Quantity(Million\ tons), P = Price(Rs.\ Per\ kg)$

i. Sketch the demand and supply functions

ii. Calculate equilibrium price and quantity in domestic potato market in Sri Lanka

iii. Calculate price elasticity of demand at equilibrium price and comment on it
iv. Calculate consumer surplus and producer surplus at equilibrium price
v. If the government imposes a maximum price of Rs.5.00 per kg, calculate domestic supply, demand and surplus/ deficit
vi. What are the measures that can be taken to solve the problem of deficit/ surplus?

4. Write short notes on the following;
    a. Market failure.
    b. Public goods.
    c. Externalities.
    d. Coase Theorem.
    e. Tragedy of commons

Part II

5. Write short notes on the followings;
    a. Economic Model
    b. Circular Flow of Rupees through Economy
    c. Production Possibility Frontier
    d. Inflation

6. .
    a. Define the following terms
        i. GDP
        ii. GNP
        iii. NNP
        iv. NI
    b. Discuss rules in computing GDP

c. Suppose we have an economy described by the following functions.

$$C = 50 + 0.8YD$$
$$\bar{I} = 70$$
$$\bar{G} = 200$$
$$\overline{TR} = 100$$
$$t = 0.20$$

i. Calculate the equilibrium level of income and the multiplier in this model.

ii. Calculate the budget surplus.

iii. Suppose that t increases to 0.25. What is the new equilibrium income and the new multiplier?

iv. Calculate the change in the budget surplus. Would you expect change in the surplus to be more or less if $c = 0.9$ rather than 0.8?

v. Can you explain why the multiplier is 1 when $t = 1$

7.

a. Discuss the following in relation to fisheries

i. Population Growth relationship

ii. Effort Catch relationship

iii. Open access equilibrium

b. Distinguish between Maximum Sustainable Yield and Maximum Economic Yield of fisheries and show graphically how you find the Maximum Economic Yield.