



ECN 2013: Advanced Economic Theory

Answer all questions

Time: Three Hours

- 01.
- a. Define the following concepts in National Income model
- i. Average propensity to consume
 - ii. Marginal propensity to consume
 - iii. Average propensity to save
 - iv. Marginal propensity to save
- (08 Marks)
- b. Suppose an Economy is described by the following functions
- $C = 50 + 0.8Y_d$
 $\bar{I} = 70$
 $\bar{G} = 200$
 $TR = 100$
 $t = 0.20$
- i. Calculate the equilibrium level of income and the multiplier in this model.
 - ii. Calculate the budget surplus, BS
 - iii. Suppose that t increases to 0.25. What will be the new equilibrium income and the new multiplier?
 - iv. Explain why the multiplier is one when $t=1$
- (12 Marks)
- 02.
- a. What is money? (02 Marks)
- b. Explain briefly the following concepts of demand for money
- i. Transactions demand (07 Marks)
 - ii. Precautionary demand (07 Marks)
- c. What is meant by liquidity trap? (04 Marks)
03. a. Show that α and β are elasticity coefficients of labor and capital in Cobb- Douglas production function (06 Marks)
- b. Consider the following production function
- $Y = X + 4X^2 - 0.2X^3$ where Y and X are output and input variables respectively
- i. Find the level of X at which Y would be maximized (02 Marks)
 - ii. Calculate Elasticity and state its appropriate stage when $X=6$, $X=9$ and $X=15$ (06 Marks)

c. Consider the following production function

$$Y = f(X_1, X_2, X_3) = A X_1^{0.2}, X_2^{0.3}, X_3^{0.3}$$

i. Find the level of degree of homogeneity

(02 Marks)

ii. Comment on appropriate returns to scale with the use of a graph.

(04 Marks)

04.

a. What do you mean by producer equilibrium?

(03 Marks)

b. Consider the following Lagrange multiplier equation

$$Q = A L K^\beta + M[C - K P_K - L P_L]$$

Suppose the following information is given to you

Q = output, L = labor, K = capital, $\alpha = 0.25$, $\beta = 0.5$, M = multiplier

A = 100, C = 300, $P_K = 10$, $P_L = 5$

i. Obtain equations for MP_L and MP_K

(02 Marks)

ii. Find the level of K and L at the point of producer equilibrium and interpret your results

(05 Marks)

c. Show the relationship between

i. Average variable cost and Average product

(03 Marks)

ii. Marginal product and marginal cost

(03 Marks)

d. How does a Lump-Sum Franchise tax affect a firm's cost curves?

(04 Marks)

05.

a. How is the short run supply curve of a perfectly competitive industry derived?

b. Distinguish internal and external economies

c. What is meant by monopoly power

(20 Marks)