

**Uva Wellassa University**  
**Faculty of Management**  
**Degree of Bachelor of Business Management in Entrepreneurship and**  
**Management**  
*Year 2 Semester II – Examination June/July 2010*  
**EMG 241-3 Economic Thinking in Business**

**Time : Two hours and thirty minutes**  
**Total marks : 80**  
**Calculators are allowed**

Index No:

**PART C - Essay Questions**

**Answer three questions including question no.1**

01. Computer output of Ordinary Least Squared (OLS) method which has been used to estimate the Cobb-Douglas production function as follows.

$$Q = AL^\alpha K^\beta$$

reg logQ logL logK

Model		1.50006134		2		.750030668		F( 2, 16) =	247.60
Residual		.048467099		16		.003029194		Prob > F	= 0.0000
								R-squared	= 0.9687
								Adj R-squared	= 0.9648
Total		1.54852843		18		.086029357		Root MSE	= .05504

logQ		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
logL		2.263842	.2651167	8.54	0.000	1.701819 2.825864
logK		.0800331	.0223719	3.58	0.003	.0326067 .1274594
_cons		3.902493	.3161609	12.34	0.000	3.232261 4.572724

- I. Find the Cobb-Douglas production function.
- II. Explain the value of Coefficient of Determination ( $R^2$ ).
- III. Calculate the  $MP_L$  (Marginal Production of Labor),  $MP_K$  (Marginal Production of Capital) and Marginal Rate of Technical Substitution (MRTS) functions.
- IV. What can you say about the returns to scale of this firm?
- V. Check the overall significance of the model and significance of the coefficients by using P- values.

02. Production function of a firm is given below. In this firm  $w = 20$ ,  $p = 10$ ,  $r = 40$ .

$$Q = 25K^{0.5}L^{0.5}$$

- I. If (Capital)  $K = 20$ , find the optimum level of labor during the short run.
- II. Find the maximum profit during the short run.
- III. Assume that after few years, this firm reaches to long run by changing all factors with the same production function. Furthermore they have allocated Rs.1000 for the production process. Find the optimum levels of labor and capital which they should employ in order to maximize the production.
- IV. Find the maximum output which they can produce in the long run.
- V. If the wage rate increase up to 30 ( $W=30$ ), find the new production equilibrium.

(3x5=15 Marks)

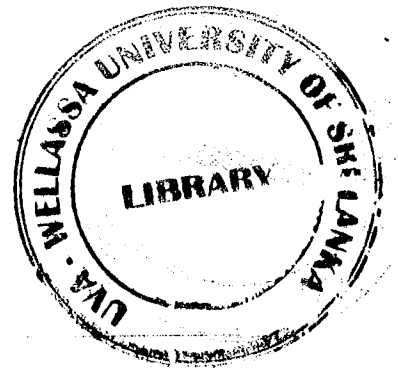
03. "The effectiveness of the Fiscal policy and Monetary policy depend on various factors". Explain the above statement by using IS – LM model.

(15 Marks)

04. Briefly explain the followings

- I. Lemons Problem
- II. Externalities
- III. Public goods
- IV. Principal agent problem
- V. Moral Hazard

(3x5=15 Marks)



05. Information about a hypothetical economy is given below.

$$C = 185 + 0.8Y_d$$

$$T = 50 + 0.25Y$$

$$I = 100 - 500r$$

$$M = 10 + 0.1Y$$

$$G = 135$$

$$X = 60$$

$$MD = 0.4Y - 200r$$

$$MS = 5200$$

$$P = 10$$

- I. Find the level of income and interest rate when both goods and money market at the equilibrium level.
- II. Calculate the value of Tax multiplier, Investment multiplier and Import multiplier.
- III. Calculate the value of Fiscal policy multiplier and Monetary policy multiplier.
- IV. If government is going to increase the government expenditure (G) up 145, find the new equilibrium.
- V. Find the Crowding out effect of expanding government expenditure and show it graphically.

(3x5=15 Marks)