Uva Wellassa University

Faculty of Management

Uva Wellassa University

Science and Technology and Computer Science and Technology Degree programme

Year 3 Semester II Examination – June/July 2009

EMG 344 -3 Applied Economics and Value Addition

Section III – Essay Questions
Answer the question no.1 and any THREE questions from question no.2 to 5

1. a) Production function of a competitive firm is given by $Q = 2K^{0.5}L^{0.5}$, price of labor is given as w = 2, price of output is given as P = 6. If K = 9
   i. Find the optimum labor rate
   ii. If w is increased up to 3, find the optimum labor rate
   iii. If w = 2 and P is decreased to 4, find the optimum labor rate

   b) A firm has a production technology given by: $Q = L^{0.25}K^{0.25}$, initial input prices are given by w =1 and r = 1. Suppose for the moment that the amount of capital is fixed at K= 4.

   i. Find the marginal product of labor
   ii. Is the marginal product of labor diminishing? Why?