

國立台灣科技大學九十五學年度碩士班招生試題

系所組別：企業管理系碩士班甲組、乙組、甲一高職教師組、乙一高職教師組
科 目：經濟學

「總分 100 分」

1. Two bakeries serve a small, isolated rural community. Golden Bread Company is the low cost price leader, and Farmer's Family Bakery is the price follower. Golden's cost function has been estimated as $TC = 8,000 + 6.5Q + 0.00047Q^2$, where TC is the firm's total cost per month and Q represents dozens of loaves of bread. The market demand curve has been estimated as $P = 24 - 0.00125Q$. The market views the products of the two bakeries as essentially similar, and so they share the market when their prices are equal. Popular Bakery is a major city bakery that is considering entering the rural market. Its production facilities are large, and its average variable cost per unit is constant at a level about 20% less than Golden's minimum average cost. However, the additional transportation cost that Popular would have to incur would mean that its delivered cost would be about 50% more than its average variable cost. Popular is expected to enter the rural market if the price is at least 20% over its delivered cost per dozen. (25 points)
 - (1) What would be the profit-maximizing price that Golden will set if it ignores the potential entry of the Popular Bakery Company? Calculate the firm's profits at that price. (10 points)
 - (2) What is the limit price that will keep the Popular Bakery Company out of the rural market? What will be Golden's output and profit levels at that price? (10 points)
 - (3) Suppose that you are the manager of Golden. What price Strategy would you choose? And why? (5 points)



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2. (25%) There are common trends that government spends more than it collects in taxes, it borrows from the private sector to finance the budget deficit. The accumulation of past borrowing is the government debt. However, there are also two complete different views on the government debt, including the traditional view of government debt and so called "Ricardian Equivalence" view of government debt. Please explain fully how these two different views on the effect of consumption, output, and economic growth, respectively.



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3. If you are exposed to a situation that results in a 50/50 chance of winning or losing \$100 and insurance that removes the risk costs \$ 20, at what level of wealth will you be indifferent relative to taking the gamble or paying the insurance? Assume your utility function is $U(W) = -W^{-1}$. (25%)

4. Consider a simple model of human capital in which production is given by $Y_t = (A_t L_t)^\alpha K_t^{1-\alpha}$, and A is a measure of the efficiency of labor, such that the productive capacity of the stock of labor, or level of human capital, is $H = AL$. Then $Y_t = H_t^\alpha K_t^{1-\alpha}$. A proportion s_k of income is invested in physical capital, and a proportion s_h in human capital. The depreciation rates are respectively δ_k and δ_h . The population does not grow. Find the equilibrium physical capital to human capital ratio, using the condition that both investments must yield the same return. (25%)

