

淡江大學 101 學年度碩士班招生考試試題

系別：產業經濟學系

科目：產業經濟學

考試日期：2月26日(星期日) 第3節

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1. The common measure of market power is the concentration ratio for an industry.
 - (a) How large would the four-firm concentration ratio, eight-firm concentration ratio and Herfindahl-Hirschman Index be in a pure monopoly? (15%)
 - (b) How large would the four-firm concentration ratio, eight-firm concentration ratio and Herfindahl-Hirschman Index be for perfect competition? (15%)

2. (a) What is Nash equilibrium? Can you define it? (5%)
 - (b) The following table shows a duopoly price game. For simplicity, we assume that each firm has the same cost and demand structure. Each firm can choose whether to charge its normal price or lower its price below marginal costs and try to drive its rival into bankruptcy and then capture the entire market. The entries in the cells show the profits for two players. For example, in cell C, AA company plays “price war” and BB company plays “normal price.” The result is that AA has profit of -\$100 while the BB company has profit of -\$10. Does the Nash equilibrium exist? If so, which cell captures the Nash equilibrium? (10%)

Table 1. A Payoff Table for a Price War

		BB Company	
		Normal price	Price war
AA Company	Normal price	A \$10	B -\$100
	Price war	C -\$100	D -\$50

- (c) Does the Nash equilibrium always exist in a duopoly price game? Can you design an example such that the Nash equilibrium does not exist? (10%)
3. In most areas of economic analysis there are predominant methodologies. In the case of Industrial Economics, the structure-conduct-performance paradigm fits the role.
 - (a) What is structure-conduct-performance paradigm? (5%)
 - (b) What kind of variables can characterize the structure, conduct and performance of an industry? (15%)
4. (a) What is vertical integration? Can you define it? (5%)
 - (b) One can take the ratio of a firm's value added to its final sales revenue as an index of its degree of integration. Can you give some comments on this index? Is it possible that this simple index is biased? (10%)
5. We take the case of a monopolist maximizing profits. It is well-known that the price-cost margin is equal to the inverse of the elasticity of demand. Can you prove this? (10%)