

國立高雄大學 108 學年度研究所碩士班招生考試試題

科目：經濟學

系所：經營管理研究所(無組別)

是否使用計算機：是

考試時間：100 分鐘

本科原始成績：100 分

**I. Multiple Choice Questions (45 points)**

*Please select **ONE** most appropriate answer in each following questions.*

- ( ) 1. A normal good is a good whose demand curve
- A. is upward sloping
  - B. is downward sloping
  - C. is a vertical line
  - D. jumps from one point on the quantity axis to another, leaving a gap
- ( ) 2. A production function measures the relation between
- A. the quantity of inputs and the quantity of output.
  - B. input prices and output prices.
  - C. input prices and the quantity of output.
  - D. the quantity of inputs and input prices.
- ( ) 3. The goal a standards and charges system is to reduce the externality to the
- A. level optimal to the firms
  - B. socially optimal level
  - C. level where private marginal cost equals price
  - D. level acceptable to the government
- ( ) 4. If all inputs are doubled and so is the resulting output, the technology features
- A. increasing returns to scale
  - B. decreasing returns to scale
  - C. constant returns to scale
  - D. nothing to do with returns to scale
- ( ) 5. When firms face an upward-sloping labor supply curve, increases in the minimum wage
- A. will induce a higher labor supply
  - B. may even increase employment
  - C. will always decrease employment
  - D. will alter the elasticity of labor demand
- ( ) 6. The variance of a probability distribution is used to measure risk because a higher variance is associated with
- A. a lower expected value.
  - B. a higher expected value.
  - C. a wider spread of values around the mean.

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D. a more compact distribution.

- ( ) 7. If entrepreneur Allen invests his own money to build capital equipment for his jam-making business, that investment incurs
- A. an opportunity cost
  - B. royalty and fix fee
  - C. only a small filing fee
  - D. no cost
- ( ) 8. In game theory, what is a dominant strategy?
- A. A strategy that leads to the best possible outcome for both firms.
  - B. Any strategy that leads to a Nash equilibrium.
  - C. A strategy that yields a minimax outcome.
  - D. A strategy that leads to the best outcome for a firm no matter what strategy the other chooses.
- ( ) 9. In order to maximize profit, a firm producing two goods that are related in consumption should choose the levels of output at which
- A. total marginal revenue equals total marginal cost.
  - B. total marginal revenue equals the marginal cost of each good.
  - C. the marginal revenue of each good equals total marginal cost.
  - D. marginal revenue equals marginal cost for each good simultaneously.
- ( ) 10. For an unconstrained maximization problem
- A. the decision maker seeks to maximize net benefits.
  - B. the decision maker seeks to maximize total benefits.
  - C. the decision maker does not take cost into account because there is no constraint.
  - D. the decision maker does not take the objective function into account because there is no constraint.
- ( ) 11. If capital becomes very expensive and labor is cheap, a producer will want to use more units of labor and fewer units of capital if the technology permits this substitution. What measures how freely the producer can vary inputs as their relative prices change, but the amount of output produced remains constant?
- A. homothetic production function
  - B. constant return to scale production function
  - C. elasticity of substitution

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D. income elasticity of demand

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- ( ) 12. If an agent puts forth a high level of effort, the firm's expected revenues are \$62,000. If shirking occurs, expected revenues are \$49,000. The firm must pay the agent at least \$40,000 to join the firm and make the high effort. At least \$20,000 must be paid to get the worker to join the firm and make the low effort. The principal would prefer the worker to join the firm and put forth
- A. the high-effort level
  - B. the middle-effort level
  - C. the low-effort level
  - D. the flexible-effort level
- ( ) 13. Scientists have developed a bacteria that they believe will lower the freezing point of agricultural products. This innovation could save farmers \$1 billion a year in crops now lost to frost damage. If this technology becomes widely used, what will happen to the equilibrium price and quantity in, for example, the potato market?
- A. price will decrease, quantity will decrease
  - B. price will decrease, quantity will increase
  - C. price will increase, quantity will decrease
  - D. price will increase, quantity will increase
- ( ) 14. If the demand for gasoline is price inelastic,
- A. changes in price do not affect the quantity of gasoline demanded.
  - B. if more gasoline are sold as the result of a price decrease, total expenditures by consumers on gasoline will decrease.
  - C. the percentage change in price is less than the percentage change in quantity demanded.
  - D. the percentage change in quantity demanded is greater than the percentage change in price.
- ( ) 15. A competitive firm will maximize profit by hiring the amount of an input at which
- A. the last unit of the input hired adds the same amount to total revenue as to total cost.
  - B. the additional revenue from the last unit of the input hired exceeds the additional cost of the last unit by the largest amount.
  - C. the additional output from the last unit of the input hired exceeds the additional cost of the last unit by the largest amount.
  - D. the last unit of the input hired adds the same amount to total output as to total cost.

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**II. Essay Questions (20 points)**

1. Define the scale economies and scope economies respectively and compare their difference. (10 points)
2. According to the Prospect Theory, developed by Daniel Kahneman and Amos Tversky (1979), the relation between money and its utility is shown as Fig. 1 for an individual who buys both household fire insurance and state lottery tickets. Explain why the individual presents a “S” shape utility function. (10 points)

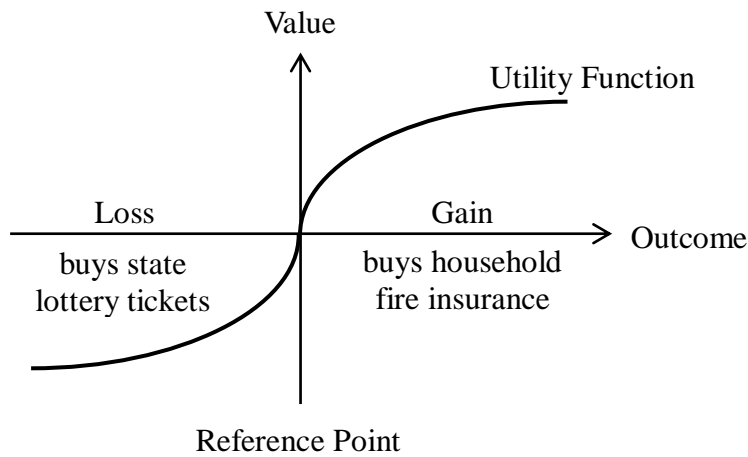


Fig. 1

**III. Problems (35 points)**

1. Suppose the consumer and seller trade a specific commodity in the market place. The strategy set for consumer and seller are contained as {Buy today, Buy tomorrow} and {Sale today, Sale tomorrow} respectively. Each player’s payoffs are shown as Table 1, where  $K \geq 1$ .

- (1) Show how the mixed-strategy Nash equilibrium depends on the value of  $K$ . (5 points)

Table 1

- (2) Calculate the optimal utilities of Seller and Consumer. (10 points)

		Consumer	
		Buy today	Buy tomorrow
Seller	Sale today	$K, 1$	$0, 0$
	Sale tomorrow	$0, 0$	$1, K$

2. Solve the problem. And state the optimized value of the function at the solution.

$$\max_{x_1, x_2} y = ax_1^2 + bx_2^2 \quad \text{subject to } x_1 + x_2 = 5$$

where  $a > 0$  and  $b > 0$ .

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**(Hint: Use the Lagrangian multiplier method) (20 points)**