

淡江大學八十九學年度日間部轉學生招生考試試題

76

系別：運輸管理學系三年級

科目：經濟與統計

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一、解釋名詞：(每題五分，共五十分)

1. Opportunity Cost
2. Elasticity of Demand
3. Price Discrimination
4. Comparative Advantage
5. Congestion Cost
6. Probability Density Function
7. Expectation
8. Maximum Likelihood Estimation
9. Random Sampling
10. ANOVA

二、計算與問答題：(每題十分，共五十分)

1. Calculate the expected monetary value for each of these games from your point of view:
 - a. We flip a coin; if heads appears, I get \$1 from you; if tails appears, you get \$1 from me.
 - b. We flip a coin; if heads appears, I get \$1 from you; if tails appears, you get \$10 from me.How much would you pay me for the privilege of playing either game?
2. With undergraduate college enrollments expected to rise in the future, what do you predict will happen to the returns to graduate education?
3. A community planning on charging a fee for trash pickup might structure the fee in any of several ways. It might, for example, charge (1) a fixed amount per can; (2) an amount per pound of garbage; or (3) a flat fee per month, without regard to amount of garbage. How would each of these affect the amount and type of garbage produced? Which system would lead to an increase in the use of trash compactors? Which would lead to the most garbage?
4. Let X be a continuous random variable with distribution
$$f(x) = \begin{cases} \frac{1}{6}x + k & \text{if } 0 \leq x \leq 3 \\ 0 & \text{elsewhere} \end{cases}$$
 - a. Evaluate k .
 - b. Find $P(1 \leq X \leq 2)$.
5.
 - a. What does the correlation coefficient measure? What is its range of values?
 - b. What is the relationship between correlation and regression analysis?