

考試科目	保險法	所別	風管所	考試時間	5月16日 星期六	第 1 節
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風險管理與保險學系
博士班法律組入學考試
保險法試題

(申論題：每題 25 分)

- 一、日前社會輿論質疑，現行兒童保險死亡理賠金額規定的「喪葬費用」以二百萬元上限，如此規定恐怕會誘發不肖父母謀害未成年子女的不良動機。試問保險法第 107 條之立法理由何在？於學理與實務運作上有何潛在缺失？
- 二、責任保險之保險事故發生後，於被保險人與受害人進行和解時，責任保險人雖有派員參與和解，但出席代表蓄意不於和解書上簽字，其目的在於預留不受參與和解之拘束，或在內部核賠作業時擅自剔除既成和解之理賠書。試就此運作實務提供法律意見。
- 三、對於要保人依保險法第 120 條規定申請保單質借，保險人能否拒絕？要保人能否以保險契約（具有現金價值）為質，向保險人以外之第三人借款？試解析之。
- 四、依保險法第 153 條之規定，保險業負責人（董事長、董事、監察人、總經理及負責決定該項業務之經理），對公司之債權人應負連帶無限清償責任。試評析其立法理由及構成要件。

考試科目	個體經濟學	所別	風管系(管理組)	考試時間	5月16日 星期六 第1節
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Problem I. Consumption Choices (30%)

Consider the following consumption decision problem:

$$\begin{aligned} \max_{c_1, c_2, S} \quad & u(c_1) + \beta u(c_2) \\ \text{s.t.} \quad & c_1 + S = y_1, \quad y_1 > 0 \\ & c_2 = y_2 + (1+r)S \\ & \beta \text{ and } r \text{ are given} \end{aligned}$$

Assume that $u(c)$ is strictly concave and strictly increasing in c ; moreover, $u(c)$ is twice continuously differentiable. Let (c_1^*, c_2^*, S^*) be the solution to this decision problem.

- [a] (6%) Combine two budget constraints of two periods into the life-time budget constraint. Explain the result you get.
- [b] (8%) Derive a condition under which $c_1 = c_2$.
- [c] (8%) Explain your answer in [b].
- [d] (8%) Show that when your condition in [b] holds and $y_1 > y_2$, $S^* > 0$.

Problem II. Consumption Choices under Uncertainty (30%)

Consider the following consumption decision problem:

$$\begin{aligned} \max_{c_1, c_{2H}, c_{2L}, S} \quad & u(c_1) + \beta[0.5u(c_{2H}) + 0.5u(c_{2L})] \\ \text{s.t.} \quad & c_1 + S = y_1 > 0, \quad y_1 > 0 \\ & c_{2H} = y_2 + (1+r)S, \\ & c_{2L} = y_2 - \varepsilon + (1+r)S, \quad \varepsilon > 0, \\ & y_1, y_2, \varepsilon, \beta, \text{ and } r \text{ are given.} \end{aligned}$$

Assume that $u(c)$ is strictly concave and strictly increasing in c ; moreover, $u(c)$ is twice continuously differentiable. Assume that $y_1 = y_2 = y$.

- [a] (5%) Is the solution of S the same as the one in **Problem I**? Why?
- [b] (10%) Explain how changes in ε affect the solution of S .
- [c] (15%) Can insurance replace the role of savings (S)? Explain your answer.

You need define insurance before answering the question.

(背面還有試題)

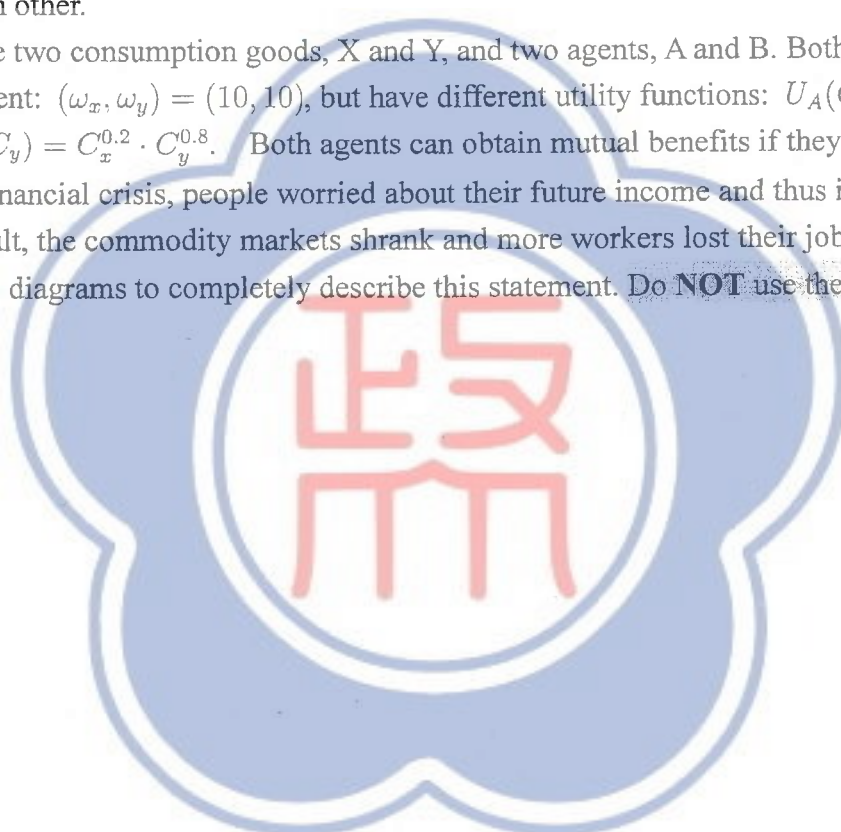
考 試 科 目	個體經濟學	所 別	風管系(管理組)	考 試 時 間	5月16日 星期二 第 1 節
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Problem III. Use diagrams to illustrate the following statements (40%)

You need explain clearly your diagrams to obtain the full scores.

Diagrams without any explanation will be given zero as the score.

- [a] (15%) There are two consumption goods, X and Y, and two agents, A and B. Both agents' endowments are $(\omega_x^A, \omega_y^A) = (10, 0)$ and $(\omega_x^B, \omega_y^B) = (0, 10)$ respectively. Both agents have the same utility function: $U(C_x, C_y) = C_x \cdot C_y$. Both agents can obtain mutual benefits if they trade with each other.
- [b] (15%) There are two consumption goods, X and Y, and two agents, A and B. Both agents have the same endowment: $(\omega_x, \omega_y) = (10, 10)$, but have different utility functions: $U_A(C_x, C_y) = C_x \cdot C_y$ and $U_B(C_x, C_y) = C_x^{0.2} \cdot C_y^{0.8}$. Both agents can obtain mutual benefits if they trade with each other.
- [c] (10%) Due to financial crisis, people worried about their future income and thus increased their savings. As a result, the commodity markets shrank and more workers lost their jobs. [Hints: you might need two diagrams to completely describe this statement. Do NOT use the IS-LM diagram.]



考試科目	最理統計學	所別	國際金融學院學系	考試時間	5月16日 星期六	第一節
<p>1. 嘗試定義離散型態與連續型態之 Martingale，簡述於風險管理或財務評價之主要理論及應用個案。(25%)</p> <p>2. 若間斷型隨機變數 X_1 及 X_2 的 p.d.f. 為</p> $f(x_1, x_2) = \frac{(x_1 + 2x_2)}{18}$ $(x_1, x_2) = (1,1)(1,2)(2,1)(2,2)$ <p>試求 X_2 在 $X_1 = x_1$，且 $x_1 = 1$ 或 2 條件下之期望值及變異數。(20%)</p> <p>3. 自常態分佈的母體中抽取 n 個樣本，如何利用樣本資料估計母體常態分配的參數，請同時說明所選取統計量的性質。(20%)</p> <p>4. F 為定義於實數上之正連續函數，如何將定義於給定 $[a, b]$ 區間 ($b > a$) 之函數 F 重新定義為機率分佈函數 (probability distribution function)，並決定相對於此定義之密度函數 (probability density function)。(10%)</p> <p>5. 說明隨機過程或是統計理論應用於風險管理或保險精算相關領域之實例，請清楚說明理論依據與實際應用之內容。(25%)</p>						
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