

考 試 科 目	經濟學	所 別	國際經營與貿易學系	考 試 時 間	5 月 22 日 (六) 第一節
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- 1.
- A. Suppose that the World Bank has decided to help poor economies develop. The plan is to give any economy with a GDP per capita of less than US\$1,000 free capital on a per capita basis. Will such a plan enable poor countries achieve the same output per capita as in the rich economies in the long run? Why or why not? (10 points)
- B. Now suppose that there is no World Bank subsidy program. Instead, each poor country has a government that can set the saving rate of its own economy. Other things being equal, is there a saving rate that will allow poor economies to eventually catch up with the rich nations' standard of living? Why or why not? (10 points)
2. By most measures, the recent world economic crisis that began in late 2007 has seemed to have eased off in the latter part of 2009. Policymakers around the world are starting to wonder when and how to start taking fiscal and monetary stimulus off the world economy. Do you think it is more important to start by cutting budget deficits or by raising interest rates? Justify your answer! (10 points)
3. Consider an economy that consists of a single consumer who lives for only two periods. The consumer's income in the current period is  $Y_1$ , and  $Y_2$  in the second period is  $Y_2$ ;  $C_1$  is the amount that the consumer consumes in the current period, and  $C_2$  is the amount that he consumes in the second period. The consumer pays taxes equal to  $T_1$  in the current period and pays taxes equal to  $T_2$  in the second period. The government uses these taxes to finance government expenditures, which are equal to  $G_1$  in the current period and equal to  $G_2$  in the second period. The consumer can freely borrow and lend at interest rate  $r$ . Assume throughout this problem that the government satisfies its budget constraint:
- $$G_1 + \frac{G_2}{1+r} = T_1 + \frac{T_2}{1+r}$$
- In addition, assume that the consumer understands that the government's budget constraint always holds. Finally, assume that the consumer's goal is to smooth consumption completely across the two time periods: that is, he sets  $C_1 = C_2$ .
- A. Write down the consumer's budget constraint. (2 points)
- B. Let  $Y_1 = 2100$ ,  $Y_2 = 1050$ ,  $G_1 = T_1 = 0.3Y_1$ ,  $G_2 = T_2 = 0.3Y_2$ , and  $r = 0.1$ . Find  $C_1$  and  $C_2$ . Compute national saving in the current period, i.e., what is  $S \equiv Y_1 - C_1 - G_1$ . (8 points)
- C. In this framework, does a temporary increase in government spending (only  $G_1$  increases) shift the desired savings by more or less than a permanent increase in government spending (both  $G_1$  and  $G_2$  increase by the same amount)? Justify your answer! (10 points)

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4. A consumer with income \$120 to spend on bread and cheese has the utility function  $u(b, c) = \min\{b, c\}$ .

(i) (4 points) Calculate the Marshallian demand function of this consumer for cheese.

(ii) (6 points) Suppose that the unit price of bread increases from \$4 to \$8 while the unit price of cheese remains at \$4. What is the total change in the quantity demanded for cheese? How much of this change is attributed to the income effect?

5. Widgets are produced by firms operating in a monopolistically competitive industry. Suppose the demand facing any one firm is given by

$$q = 1200 \cdot \left[ \frac{1}{n} - \frac{1}{2400}(p - \bar{p}) \right],$$

where  $q$  is the number of widgets sold per firm,  $n$  the number of firms in the industry,  $p$  the price that a firm charges, and  $\bar{p}$  the average price of other firms. In order to produce any widget, each firm needs to incur a fixed cost of \$200. However, the marginal cost for production is zero.

(i) (10 points) Suppose 100 firms coexist in the market initially. How much profit does each firm make?

(ii) (10 points) In the long run, firms can enter and exit the market freely. Find the equilibrium number of firms, and the average industry price in the long run.

6. Consider the following ultimatum game. Two players negotiate over how to share one dollar. Player 1 proposes a share  $x$  to player 2. Then after observing player 1's offer, player 2 decides whether to accept it or reject it. If player 2 accepts the proposal, then player 1 obtains  $1 - x$  and player 2 obtains  $x$ . If player 2 rejects the proposal then each player gets zero. We assume  $x$  can only take on values in  $\{0, 0.5, 1\}$ .

(i) (12 points) Compute all the subgame perfect equilibria of this game.

(ii) (8 points) Find a Nash equilibrium that is not subgame perfect.

考試科目	英文	所別	國際經濟學系	考試時間	5月22日(六)第二節
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(Adapted from *The Economist*) The Greek debt crisis is spreading. Europe needs **bolder, broader solution - and quickly.**

There comes a moment in many debt crises when events spiral out of control. As panics sets in, bond yield lurch sickeningly upwards and fear spreads to shares and currencies. In September 2008, the failure of once-stellar Lehman Brothers almost brought down the world's banking system. A decade earlier, Russia's chaotic default on its sovereign debt rocked the credit markets, felling Long Term Capital Management, a hugely profitable American hedge fund. When the unthinkable suddenly becomes the inevitable, without pausing in the realm of the improbable, then you have contagion.

The Greek crisis - or more properly Europe's sovereign-debt crisis - looks dangerous close to the that. Even as negotiations from the European Union and the IMF are haggling with the Greek government over an ever-growing bail-out package, the yield on Greek debt: two-year bonds soared towards 20% this week. Portugal's borrowing costs jumped. Spain's debt was downgraded, along with Portugal's and Greece's, and Italy came worrying close to a failed debt auction. European stock markets have slumped and the euro itself fell to its lowest level in a year against the dollar.

1. (30%) 在閱讀前段敘述後, 請將之翻譯為中文。
2. (35%) 請用英文評論這段敘述 (不得少於400字)。
3. (35%) 假設你是這段敘述的作者, 請繼續接寫。你的寫作重點在於提供解決方案 (不得少於400字)。