

1. 某消費者效用函數為  $U(x_1, x_2) = \ln x_1 + \ln x_2$ ， $P_1$  及  $P_2$  分別為  $x_1$  及  $x_2$  之價格，而該消費者之所得為  $Y$ 。
- (1) 試求算  $x_1$  及  $x_2$  之 Marshallian Demand Functions。(5 分)
  - (2) 試求算其間接效用函數。(5 分)
  - (3) 試求算其支出函數。(5 分)
  - (4) 試求算  $x_1$  及  $x_2$  之 Hicksian Demand Functions。(5 分)
  - (5) 消費者原來面對之價格及所得分別為  $P_1=1$ ， $P_2=2$ ， $Y=100$ ，今  $P_2$  下降為 1，試求算其補償變量(Compensating Variation)。(5 分)

(註：可能有用之數學公式： $\frac{\partial \ln Z}{\partial Z} = \frac{1}{Z}$ ， $e^{\ln Z} = Z$ ， $2^{-.5} = .71$ )。

2. 兩岸三通似乎對雙方有利，本題模型試圖解釋為何遲遲不通。我國及 PRC 之策略及報酬矩陣如下，表中數字(a,b)分別表示我國及 PRC 之報酬。
- (1) 何謂優勢策略(Dominant Strategy)? 請問此一賽局存在優勢策略嗎? 若此一賽局存在優勢策略請問是什麼策略?(10 分)
  - (2) 何謂 Nash 均衡? 請問此一賽局的 Nash 均衡策略是什麼?(10 分)
  - (3) 何謂柏拉圖改善(Pareto Improvement)? 就四組報酬(a,b)而言，請問相對於 Nash 均衡的柏拉圖改善(Pareto Improvement)是哪一組?(5 分)

		PRC	
		硬(一中才可三通)	軟(兩國就可三通)
我國	硬(兩國才可三通)	(2, 2)	(4, 1)
	軟(一中就可三通)	(1, 4)	(3, 3)

3. (1) In the *short run*, what are the differing effects of monetary and fiscal policy? Why? (10%)
  - (2) In the *long run*, what differences exist between the use of monetary and fiscal policy? Why? (10%)
4. Suppose that you are a policy maker trying to decide whether it makes sense to stimulate the economy. You know that stimulation is a two-edged sword: the policy action will bring lower unemployment but higher inflation. How would the following developments affect your decision? Would each development make you more or less likely to pursue macro stimulation?
- (1) The current and expected future real interest rate rises? (5%)
  - (2) You place greater weight on the welfare of future generations than you used to. (5%)
5. Assume that taxes are lump sum. Then assume that the real public debt remains constant from period 2 onward. Also, the time paths of government consumption and real transfers do not change. Discuss the aggregate wealth effect that results from the government's *deficit-financed tax cut* under the following considerations:
- (1) Finite lifetimes? (5%)
  - (2) Uncertainty about who will pay the higher future taxes? (5%)
  - (3) The possibility that government will print more money in the future rather than raising taxes? (5%)
  - (4) The imperfection of private loan markets? (5%)