Part I

(10%) 一. 設一島國只擁有椰子樹, 每年可生產一百萬價值的椰子, 能供自用或外銷, 在過去幾年裏, 此島國有經常帳(CA)盈餘, 因而取得外國債券, 價值是五十萬, 年利率是 8% ; 今年島國居民的消費是 1005000, 政府修路花用 20000, 新種椰子樹的價值是 15000; 試問此島國的投資, 全國儲蓄, 淨出口, 資本與金融帳(KFA), GDP, GNP 之值為何 ?

(20%) 二. 設 y_i=實質所得, c_i=實質消費, i=1,2 期, 而效用函數是兩期消費的函數; 今政府在第一期減少實質定量稅 t. 試用此兩期模型的預算式輔助說明, 何謂 李嘉圖對等定理(Ricardian equivalence proposition). 設若家計單位受到了流動限制, 此定理還成立嗎? 試用兩期模型的圖解說明 . (設 r=每期的實質利率)

(20%) 三. 設生產函數 $Y=A\,F(N,K)$ 是 Cobb Douglas 型, 其中 Y 是產出水準, A=4, 勞動(N)與資本(K)對產出的彈性皆是 0.5 , 又 N 的成長率是 0.2 , 資本的折舊率是 0.1 ; 試用 Solow 成長模型回答下列問題:

1. 設儲蓄率是 0.3 , 則在恆定狀態時, 人均資本為何 ?

2. 儲蓄率須是多少, 才能達到金律狀態(Golden rule state). 又由 1 內的恆定狀態該如何的往 2 內的金律狀態走? 須考慮什麼經濟課題 ?

3. 畫 Solow 模型於恆定狀態時的簡圖, 以標明 1 與 2 的相對位置 .

第二部份　共 4 題，全部作答。

4.　諾貝爾經濟學獎得主 Robert Solow 在某次的訪問中做了下列的陳述：

> Over the years we have weakened those [automatic] stabilizers. We've weakened them by, for good or evil, diminishing welfare and other transfer expenditures....
>
> The beauty of these automatic stabilizers was that they didn't depend on the stupid Congress getting its act together. It just happened. It wasn't exactly a policy rule but it operated almost as if it were. And so one of the things I think we could do right now is to go back and try to find ways of strengthening those automatic stabilizers again. ("An Interview with Robert Solow" by D. Clement, *The Region*, September 2002.)

請問：

4.1（10分）何謂 "automatic stabilizers"？定義並舉~~一例~~說明之。（超過一例者不計分）

4.2（10分）為何 Solow 認為 "We've weakened [automatic stabilizers] by ... diminishing welfare and other transfer expenditures."？　請提出經濟學的解釋。

4.3（10分）你認為 Solow 對於總體經濟學思想史中的關於貨幣政策的 rules vs. discretion爭論應持何種立場？理由為何？

5.　（5分）If a consumption function $C = f(Y)$, where C is consumption and Y is disposable income, which satisfies Keynes' "fundamental psychological law":

> The fundamental psychological law, ..., is that men are disposed, as a rule and on the average, to increase their consumption, as their income increases, but not by as much as the increase in their income."
> (J.M. Keynes, *General Theory*, p.96).

What property should the function f have?

6. （5分）True or false? Suppose that there is a freeze in Florida destroys crop of oranges, hence the price of oranges in the US rises. According to the permanent income hypothesis, California orange growers save more. （無解釋不計分）

7. （10分）Derive the Phillip curve from the AS function $Y_t = \bar{Y} + \alpha(P_t - P_t^e)$. According to your Phillips curve, will an inflation shock causes a permanent reduction of unemployment?

--end--