考試科目	總體經濟學	所別	經濟學系 161	考試時間	3月6日(六)第三節

1. 底下是一簡單凱因斯 IS-LM 模型：(25%)

$$Y = C(Y - T) + I(i) + G,$$
$$L(Y, i) = M / P.$$

(1) 試根據此模型及圖形分析 H1N1 病毒風暴是否會導致台灣經濟的蕭條？
(2) 目前利率已低於 1%，試根據此模型及圖形分析政府採用寬鬆貨幣政策，是否會回復經濟的景氣？

2. 底下是有關減稅方案的經濟效果議題：(25%)

(1) 何謂 Laffer Curve？試根據以上凱因斯 IS-LM 模型及數學來說明。
(2) 美國歐巴馬總統上任後，提出減稅方案來解救經濟的蕭條；試根據凱因斯學派及供給面經濟學派，以圖形來分析減稅方案的總體經濟效果。

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備註	試題隨卷繳交

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3. Consider an imaginary economy described by the Solow model of economic growth, with the production function given by $Y = K^{\alpha}L^{1-\alpha}$, where $\alpha = 0.3$. The labor force is growing at the rate of $n = 0.02$. Assume that the capital stock depreciates at a constant rate $\delta = 0.10$.

(1) Calculate the steady state levels of output per worker (y), capital per worker (k) and consumption per worker (c) for the following savings rates: $s = 0.25,\ 0.29,\ 0.31,\ 0.33$. (8%)

(2) What is the "Golden Rule" savings rate for this imaginary economy? Calculate steady state consumption at the Golden Rule savings rate and compare it to the 4 values you calculated above. (6%)

(3) Explain in your own words which of the above savings rates may be categorized as "inefficient over saving." (6%)

4. (1) How dose an increase in desired national saving in a large open economy affect the world real interest rate? (5%)

(2) How does an increase in desired investment affect it? (5%)

(3) Why do changes in desired saving or investment in large open economies affect the world real interest rate but changes in desired saving or investment in small open economies do not? (5%)

5. Suppose that the central bank does not always react systematically to changes in macro- economic conditions so that monetary policy may be described by the interest rate rule:

$$r_t = \bar{r} + h(\pi^{e}_{t,t-1} - \pi^{*}) + a_t, \qquad h > 0,$$

where a_t is a 'white noise' stochastic variable reflecting the non-systematic part of monetary policy. The above equation states that the central bank bases its policy decisions on the expected inflation gap, since it does not have full information on the current inflation rate at the time when it sets the interest rate. For simplicity, assume that the central bank does not react to the expected output gap and expectations are rational.

As usual, the economy's demand and supply sides are described by:

Goods market equilibrium: $y_t - \bar{y} = z_t - \alpha(r_t - \bar{r})$,

Short-run AS: $\pi_t = \pi^{e}_{t,t-1} + \gamma(y_t - \bar{y}) + s_t$,

where z_t and s_t are white noise reflecting demand and supply shocks.

(1) Show that the variance of output is given by $\sigma_y^2 \equiv E[(y_t - \bar{y})^2] = \sigma_z^2 + \alpha^2\sigma_a^2$, where σ_z^2 and σ_a^2 are the variances of z and a, respectively. (5%)

(2) Is monetary policy 'effective' in this model? (5%)

(3) What would be the effect of greater predictability of monetary policy? Discuss. (5%)

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