參考用

請依題號寫下答案

一、是非題：每題 8 分。請先回答是或非，再繪圖並說明理由；*沒寫理由或沒繪圖均以零分計*。

1. The Phillips curve shows that there is always a positive relationship between inflation and unemployment.

2. Suppose that there are only two large countries, home and foreign. The current account balance of the foreign country increases with the government consumption of the home country.

3. In the Solow model, other things equal, a productivity improvement causes the Golden Rule capital-labor ratio to increase.

4. The larger the amount of consumption voucher (消費券), the happier are all individuals.

5. In the IS-LM and AD-AS models, the larger the short-run equilibrium output level, the higher the short-run equilibrium interest rate.

6. Monetary policies are more effective in affecting the short-run output level if wages and prices are more flexible.

注意：背面有試題

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二、申論及計算題: 共 52 分。 *無推導或計算過程，以零分計。*

7. Suppose that the demand for real money balances (M/P) depends on the nominal interest rate, R, and on disposable income Y-T, where Y is income and T is tax.　In other words, the LM equation can be expressed as:

   $$M/P = L\,(R,\,Y\text{-}T).$$

   The planned expenditure (E) is a standard one, given by:

   $$E = C\,(Y\text{-}T) + I\,(R) + G,$$

   where C is consumption, I is investment, and G is government spending.

   a) (8 分) Derive the slope of the AD curve.

   b) (10 分) Suppose that prices (P) are not completely flexible so that the aggregate supply (AS) curve has a positive slope.　Discuss whether a tax hike (that is, an increase in T) increases or decreases output and by how much?　(Assume no change in government spending.)　Explain with graph(s) and intuition.

   c) (6 分) How would your answer (the effect of a tax cut) in (b) change if the economy is in a situation of liquidity trap?

8. Consider a two-period model with the following notations:
   C_1　consumption levels in the first period;
   C_2　consumption levels in the second period;
   Y_1　income in the first period;
   Y_2　income in the second period;
   T_1　lump-sum tax in the first period;
   T_2　lump-sum tax in the second period;
   R　interest rate (and $1+R$ is the gross rate of interest)
   All variables are in real terms.　Suppose that the individual's lifetime utility has the following form:

   $$U(C_1,\,C_2) = C_1^{1/2} + b\,C_2^{1/2},\text{ where } b>0.$$

   a) (8 分) Assume for simplicity that Y_1=Y, Y_2=T_1=T_2=0.　Write down the individual's lifetime budget constraint and derive the individual's optimal consumption in the first period (i.e. C_1) in terms of Y, b and $1+R$.

注意：背面有試題

b) (4 分) Continue from (a).　What's the impact on saving in the first period when the interest rate R decreases?　Explain with intuition from the perspective of income effect and substitution effect.

c) (4 分) Return back to the general case that Y_1, Y_2, T_1, and T_2 are all nonzero. Assume that $R=0.1$, $b=1$, $Y_1=Y_2=100$, and $T_1=T_2=12$. Calculate the optimal C_1 and saving in the first period.

d) (4 分) Continue from (c).　Suppose that the government expenditures in period 1 and 2 are $G_1=G_2=20$.　But the government reduces taxes in period 1 to $T_1=10$.　Write down the government's lifetime budget constraint to figure out how much T_2 should be.　How does this affect consumption in period 1 and the saving behavior?

9. (8 分) You open up the financial page of the Wall Street Journal on January 2, 2013 and find the following yield curve for treasury bonds.　Assume that the expectations theory of the term structure of interest rates is correct.　Use the yield curve table (below) to calculate the market's expectation of the 1-year interest rate on January 2, 2014 (1 year from now), January 2, 2015 (2 years from now), and January 2, 2016 (3 years from now):

Yield Curve on January 2, 2013

	Years to Maturity			
	1	**2**	**3**	**4**
Yield	1.6	1.8	1.9	1.8