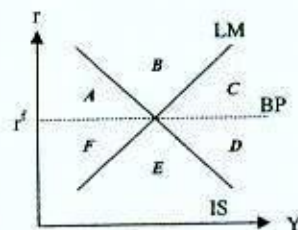●不可使用電子計算機

請務必在答案紙標明所答題號為(1), (2),…, (45)，並依題號順序作答。

I. Macroeconomics (50 points):

A. 單選題(1),(2),…,(10)，只需提供答案即可，不需提供計算過程，每題 2 分，共計 20 分。

Please choose "one" correct answer for each question. You don't need to include the computational process in your answers. (20 points)

1. As we know, Council for Economic Planning and Development (經建會) regularly announces the light signals and composite indicators for Taiwan economy. Concretely speaking, the composite indicators can be further separated into three types: leading indicators, coincident indicators, and lagging indicators. As for the respective component series, which of the following items should not be classified as a leading indicator? (1)＿＿＿＿ (2 points) *(a) Stock prices index; (b) Unemployment rate; (c) Index of export orders; (d) M_{1b}; (e) Index of producer's inventory.*

2. The branch of macroeconomics concerned with changes in the natural real GDP is the theory of (2)＿＿＿＿ (2 points). *(a) Business cycles; (b) Economic growth; (c) GDP gaps; (d) Unemployment.*

3. By definition, the internal balance requires (3)＿＿＿＿ (2 points) *(a) The balanced trade; (b) Zero unemployment rate; (c) The full employment output; (d) Zero inflation rate; (e) None of the above.*

4. Which of the following account should be included in the current account? (4)＿＿＿＿ (2 points). *(a) Net tourism receipts; (b) Net increase of holding of foreign financial derivatives; (c) Net direct investment abroad; (d) Changes in stock of monetary gold; (e) Changes in special drawing rights.*

5. Consider the Keynesian small open economy under floating exchange rate regime. A fall in domestic investment would eventually lead to (5)＿＿＿＿ (2 points). *(a) An increase of equilibrium income; (b) A depreciation the domestic currency; (c) A rise in private saving; (d) An improvement in trade balance; (e) A decrease in trade volume.*

6. Which of the following currency have the "largest" absolute value of currency nowadays? (6)＿＿＿＿ (2 points) *(a) NTD; (b) Baht; (c) Korea Won; (d) Japanese Yen; (e) Philippine Peso.*

7. Let Y, M^s, P represent the GDP, money supply and domestic price, respectively. According to the definition, the velocity of money (usually denoted by v) should be (7)＿＿＿＿ (2 points). *(a) $P \times M^s /Y$; (b) $P \times Y / M^s$; (c) $M^s \times Y/P$; (d) none of the above.*

8. Which of the following European country has own currency rather than euro till Dec, 2010? (8)＿＿＿＿ (2 points) *(a) Netherland; (b) Finland; (c) Switzerland; (d) Greece; (e) Ireland.*

9. The three policies which cannot be maintained simultaneously by a nation (sometimes referred to as the "Trilemma") do not include (9)＿＿＿＿ (2 points) *(a) Independent control of the money supply; (b) Independent control of fiscal policy; (c) Fixed exchange rates; (d) Free capital mobility.*

10. Canada sent wheat to Japan in exchange of U.S. dollars. In Canada, this will lead to (10)＿＿＿＿ (2 points) *(a) No change in the current account; (b) A merchandise trade deficit; (c) A balance of payments deficit; (d) A capital account surplus; (e) None of the above.*

B. 填空題(11),(12),…,(25)，只需提供答案即可，不需提供計算過程，如有必要，答案請四捨五入至小數點以下第二位，或以分數型態表示，每格 2 分，共計 30 分。

Please just provide your answers to the questions. You don't need to include the computational process in your answers. Besides, all of the answers should be rounded up or down to the second digit right after the decimal point, or expressed in fractions. (30 points)

1. Consider the complete Keynesian (IS-LM-BP) analysis framework. Let Y denote the domestic income, and r denote the interest rate (r^f is the foreign interest rate). Therefore, the right-hand side figure can be divided into six parts (from *A* to *F*).

(a) The right-hand side figure shows that the domestic economy has (11)＿＿＿＿ (2 points) (A) imperfect capital mobility; (B) perfect capital mobility.

(b) Assume domestic economy is suffering from serious BOP deficit. Furthermore, the whole country has excess demand in both good and money market. Accordingly, the domestic economy may locate in part (12)＿＿＿＿ (2 points) (Please choose from *A* to *F*). In foreign exchange market, there may exist (13)＿＿＿＿ (2 points) (A) excess demand; (B) excess supply, of the domestic currency.

2. Consider a Keynesian small open economy with the following macroeconomic variables:

$$C = \bar{C} + cY_d \; ; I = \bar{I} \; ; G = \bar{G} \; ; X = \bar{X} \; ; M = \bar{M} + mY_d \; ; Y_d = Y - T = Y - tY .$$

Here, C, I, G, X, M, t and Y_d, denote the consumption, investment, government expenditures, exports, imports, tax rate, and personal disposable income, respectively, of this economy. Besides, the "upper bar" of any of the variables denotes the exogenous or autonomous term. For example, $\bar{C}$ represents the autonomous consumption. Now, you are given the information that:

$\overline{C}=50 ; \overline{I}=80 ; \overline{G}=20 ; \overline{X}=140 ; \overline{M}=110 ; t=20\% ; c=0.7 ; m=0.2$.

Assumed that central bank employed fixed exchange rate regime, so you don't need to worry about the exchange rate fluctuations. Please answer the following questions:

(a) Based on the fore-mentioned information, it is clearly that the government imposed the __(14)__ __(2 points)__ (A) lump-sum tax; (B) balance budget tax; (C) income tax; (D) progressive tax. Therefore, the home country's equilibrium income (Y) should be __(15)__ __(2 points)__ units, and disposable income (Y_d) should be __(16)__ __(2 points)__ units. Furthermore, the trade balance of domestic economy would be __(17)__ __(2 points)__ units.

(b) However, the economy has government budget __(18)__ __(2 points)__ (please answer **surplus or deficit**) by the amount of __(19)__ __(2 points)__ units. If the authorities planned to balance the government budget, the desired tax rate should be __(20)__ __(2 points)__ %.

(c) Instead of pursuing the goal of balanced government budget, if the authorities planned to attain the external balance, that is, the balanced trade, the existing tax rate (20%) would be __(21)__ __(2 points)__ (please answer **raised or lowered**). What is more, the desired tax rate should be __(22)__ __(2 points)__ % so as to guarantee the balanced trade.

3. Rather than small open economy in problem set 2, this time, consider the domestic economy as a large open economy, thus we can employ the two-country model (Just viewing the rest of the world as a single foreign country). To clearly distinguish between the two countries, all variables of foreign countries are labeled with an asterisk, namely "*", afterwards. What is more, the domestic export is nothing but foreign country's import, determined by the foreign country's income. Likewise, it's clearly that $\overline{X}=\overline{M}^*$, so we can redefine the domestic exports behavior as followed:

$X = M^* = \overline{M}^* + m^* Y_d^* = \overline{X} + m^* Y_d^*$;

Assuming that foreign economy has almost equal condition with domestic economy (you can refer to the settings of respective counterparts in question 2):

$C^* = \overline{C}^* + c^* Y_d^*$; $I^* = \overline{I}^*$; $G^* = \overline{G}^*$; $X^* = M$; $M^* = X$; $Y_d^* = Y^* - T^* = Y^* - t^* Y^*$,

$\overline{C}^* = 50 ; \overline{I}^* = 80 ; \overline{G}^* = 20 ; \overline{X}^* = 110 ; \overline{M}^* = 140 ; t^* = 0\% ; c^* = 0.7 ; m^* = 0.2$.

Obviously, comparing to the home country, the significant difference in the foreign economy can be attributed to tax-free, and the autonomous exports (also, the autonomous imports), as well. Based on the fore-mentioned information, the equilibrium domestic income (Y) should be __(23)__ __(2 points)__ units, while the equilibrium foreign income (Y^*) should be __(24)__ __(2 points)__ units. Furthermore, the __(25)__ __(2 points)__ (please answer **home or foreign**) country would suffer from the trade deficit.
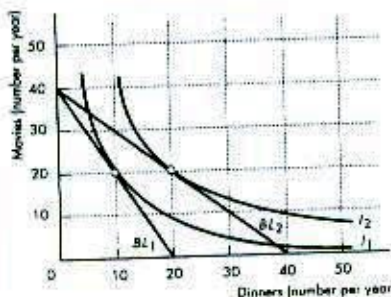
II. Microeconomics (50 points):

C. （消費者理論）填空題(26),(27),…,(40)，只需提供答案即可，不需計算過程，每格 1 或 2 分，共計 25 分。

1. Suppose bad weather decreases Taiwan's rice harvest by 16 percent. If the price elasticity of demand for wheat is 0.8, the crop failure will cause the price of rice increase for __(26)__ __(2 points)__ percent. Taken as a group, rice farmers' total revenue will __(27)__ __(1 points)__ (**increase or decrease**).

Price (per pound)	Quantity demanded (pounds per day)	Quantity supplied (pounds per day)
$100	480	0
$200	360	0
$300	240	240
$400	120	480
$500	0	720

2. The table above shows the demand and supply schedules for the market for coffee in Seattle. A tax on coffee of $75 per pound is proposed and the local government asks you to examine the effects of the tax.
   (a) With the tax, the price that consumers pay is __(28)__ __(2 points)__.
   (a) The government's total tax revenue is __(29)__ __(2 points)__.
   (b) Consumers pay __(30)__ __(2 points)__ of the $75 tax per pound, and sellers pay __(31)__ __(2 points)__ of the $75 tax per pound.

3. George has a $600 annual entertainment budget that he uses to buy trips to the movies and dinners at local restaurants. The right-hand side figure shows indifference curves and budget lines for these two goods. Use the information in this problem to give two points on George's demand curve for dinners. If the dinner price is __(32)__ __(1 points)__, George will consume __(33)__ __(1 points)__ dinners,

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while if the dinner price is ___(34)___ (1 points)___, George will consume (35) (1 points) dinners.

4. The table below gives Sam's utility schedule for consumption of coffee and donuts. Sam's weekly coffee & donut budget is $10. If coffee cost $1 per cup and donuts cost $2 per dozen, the utility maximizing combination of coffee and donuts for Sam is (36) (2 points) cups of coffee and ___(37)___ (2 points) dozen of donuts per week.

Coffee		Donuts	
Quantity consumed (cups)	Total utility	Quantity Consumed (dozens)	Total utility
0	0	0	0
1	30	1	40
2	54	2	74
3	72	3	98
4	84	4	104
5	90	5	112
6	90	6	112

5. The ABC health club charges their members with an annual membership fee and $200 dollars cleaning fee per time when member come to the club to use the facilities. Amy would like to joint ABC health club and her annual demand for the health club utilization is Q=75-0.25P. In addition to the cleaning fee, the ABC club can charge Amy $ (38) (2 points) annual fee so as to maximize the club's profit.

6. Suppose demand for Tailgate's cell phone is as following:

Price	$5000	$4000	$3000	$2000	$1000
Quantity	10	20	30	40	50

If marginal cost for Tailgate to produce the cell phone is constant at $1000, how many units should Tailgate sell in order to maximize its profits? (39) (2 points) . And what price should it charge? (40) (2 points) .

D. （廠商理論）填空題(41),(42),...,(45)，只需提供答案即可，不需計算過程，每格 5 分，共計 25 分。

1. The market demand for a certain product is known as $P = 75 - 1.5Q$, where P is price and Q is output. A typical plant that produces this product has a marginal cost of production of $MC = 25 + 50Q$. Assume that there are 100 identical plants in the market to produce this product.

(b) Suppose that each of these 100 identical plants belongs to a different firm. Thus, this market is a competitive market. What is the competitive equilibrium price in the market? (41) (5 points) .

(c) Now, suppose that all these firms have merged into one single firm. Thus, the market is a monopoly market. What is the size of the resulted deadweight loss? (42) (5 points) .

2. A country which does not tax cigarettes is considering the introduction of a $0.50 per pack tax. The country's estimated supply and demand curves for cigarettes are the followings:

$$Q^D = 140,000 - 25,000P \qquad Q^S = 20,000 + 75,000P,$$

where Q is the output quantity (packs) and P is the price per pack.

(a) What is the price a consumer needs to pay for one pack of cigarettes after the imposition of the tax? (43) (5 points) .

(b) What portion of the tax would be borne by buyers? (44) (5 points) .

(c) What portion of the tax would be borne by sellers? (45) (5 points) .