

經濟學部份

單選題，計 15 題，第 1-10 題每題 3 分，第 11-15 題每題 4 分，答錯不倒扣：

- 1 The utility-maximizing combination of goods occurs when
 - a. the marginal utility of each good is equal
 - b. the total utility of each good is equal
 - c. the quantity consumed of each good is equal
 - d. the amount spent on each good is equal
 - e. the marginal utility per dollar spent on each good is equal

- 2 As long as the firm is not operating inefficiently, which cost always increases with increases in output?
 - a. marginal cost
 - b. average fixed cost
 - c. total fixed cost
 - d. average variable cost
 - e. total variable cost

- 3 A perfectly competitive firm will produce at an economic loss (negative profit) in the short run rather than discontinue production if there is a rate of output at which price
 - a. exceeds average variable cost
 - b. exceeds average fixed cost
 - c. exceeds average total cost
 - d. exceeds marginal revenue
 - e. equals marginal cost

- 4 As the price paid to a specific resource increases
 - a. the supply of this resource will increase in the resource market
 - b. the supply of the resource will decrease in the resource market
 - c. resources will shift from other resource markets to this one
 - d. resources will shift from this resource market to others
 - e. resources usage will be unaffected

- 5 Firms will increase their investment in capital
 - a. either c or d
 - b. either d or e
 - c. as long as the marginal rate of return is less than the market rate of interest
 - d. until marginal rate of return equals the market rate of interest
 - e. as long as the marginal rate of return exceeds the market rate of interest

- 6 Which of the following would *not* be included in the *expenditures* method of calculating GDP?
 - a. consumption (personal consumption expenditures)
 - b. investment (gross private domestic investment)
 - c. government purchases (government consumption and gross investment)
 - d. compensation of employees (wages and salaries)
 - e. net exports (exports minus imports of goods and services)

- 7 Which of the following would best represent aggregate expenditures in an open economy (i.e., international trade takes place) and an active government?
 - a. $C + G + (X - M)$
 - b. $C + I + (X - M)$
 - c. $C + I + (X + M)$
 - d. $C + I + G + (X - M)$
 - e. $C + I + G + (X + M)$

- 8 If an additional \$100 is spent on investment and in the next round of spending, we have an increase of \$75, and assuming each subsequent round of spending follows the same pattern, the multiplier would be
- 10
 - 8
 - 5
 - 3
 - 4
- 9 In the short run, if the economy has less than full employment and potential output and the aggregate supply curve shifts outward, then
- price levels decrease and output increases
 - price levels increase and output decreases
 - price levels decrease and output decreases
 - price levels increase and output increases
 - price levels and output levels remain unchanged
- 10 What effect would an increase in resource costs have on aggregate demand and aggregate supply?
- aggregate demand unchanged and aggregate supply shifts outward
 - aggregate demand unchanged and aggregate supply shifts inward
 - aggregate demand shifts outward and no change in aggregate supply
 - aggregate demand shifts inward and no change in aggregate supply
 - aggregate demand and aggregate supply shift outward
- 11 If taxes change, consumption spending at each level of GDP
- rises by the decrease in net taxes times the average propensity to consume
 - falls by the decrease in net taxes times the marginal propensity to consume
 - rises by the increase in net taxes times the marginal propensity to consume
 - rises by the decrease in net taxes times the marginal propensity to consume
 - will fall or rise depending upon how much net taxes decrease
- 12 An example of a capital expenditure in the present for which shifting the cost to future generations through deficit financing might be justified because those future generations will also share in its benefits is
- Social Security
 - interest on the debt
 - welfare
 - a highway
 - the school lunch program
- 13 The largest component of M1 is
- time deposits
 - coins and currency combined
 - checkable deposits
 - savings accounts
 - money market accounts
- 14 An increase in the money supply is most likely to increase planned investment by causing
- a decrease in the prices of capital equipment
 - a decrease in the rate of interest
 - an increase in the prices of consumer goods
 - a decrease in the excess reserves of banks
 - an increase in the value of the dollar

15 Which of the following statements most accurately reflects the views of those who advocate an active approach to governmental economic policy?

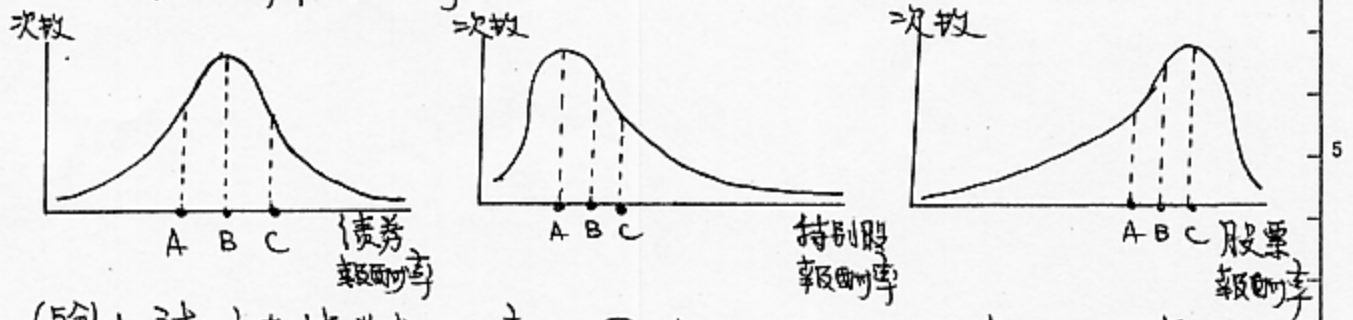
- a. the private sector is relatively stable and will correct itself if blown off course
- b. the private sector is relatively unstable but governmental policy can't do anything about economic problems when they arise
- c. sometimes the economy is stable and sometimes not, but either way the best policy for government is to do nothing
- d. the private sector is relatively unstable and when there are economic problems the government should intervene to get the economy back on track
- e. careful use of governmental economic policy can reshape the economy so as to create permanent economic stability and constant full employment

財務管理部分:

試回答下列各題:

- 一. 何謂代理問題? 許多人認為在臺灣 股東與經理人之間不存在此問題, 你的看法如何? 請說明理由. (20 分)
- 二. 企業如何知道其資產運用不當? 應如何改善? (15 分)
- 三. 匯率變化多端, 我們應基於那些考慮來預測它的變動? (15 分)

一、下面三個圖形分別表示債券報酬率, 特別股報酬率, 及股票報酬率的圖形:



(5分) 1. 請問在債券報酬率的圖形中的 A, B, C 三點中, 那一點是平均數? 那一點是中位數? 那一點是眾數?

(5分) 2. 請問在特別股報酬率的圖形中的 A, B, C 三點中, 那一點是平均數? 那一點是中位數? 那一點是眾數?

(5分) 3. 請問在股票報酬率的圖形中的 A, B, C 三點中, 那一點是平均數? 那一點是中位數? 那一點是眾數?

二、華信銀行為了分析存款者的特性, 將存款者的帳戶依存款天數與存款金額加以分成四類, 下面四種符號分別定義這四類存款帳戶:

Y: 帳戶的天數是短期的 (亦即天數小於或等於 360 天)

O: 帳戶的天數是中長期的 (亦即天數大於 360 天)

S: 帳戶的金額為小數 (亦即金額小於或等於一萬元)

L: 帳戶的金額為中大數 (亦即金額大於一萬元)

經統計結果, 獲得下表的數據:

金 額	天 數		合 計
	短期 (Y)	中長期 (O)	
一萬元及一萬元以下 (S)	4900 個帳戶	1100 個帳戶	6000 個帳戶
超過一萬元 (L)	1900 個帳戶	100 個帳戶	2000 個帳戶
合 計	6800 個帳戶	1200 個帳戶	8000 個帳戶

(8分) 1. 設 $P(A)$ 代表 A 事件發生的機率, 請計算 $P(Y)$, $P(O)$, $P(S)$, 及 $P(L)$ 分別為多少?

(8分) 2. 請計算 $P(Y \cap S)$, $P(O \cap L)$, $P(S \cap Y)$, 及 $P(O \cap L)$ 各為多少?

三. 利用過去歷史資料吾人計算出台塑與南亞之股票平均報酬率分別為 20% 與 10%，台塑與南亞股票之報酬率的標準差各為 26% 與 16%，此外，台塑與南亞之股票的相關係數為 1.0，請回答下列問題：

(10分) 1. 若你的投資組合包含 75% 台塑與 25% 南亞，則你的預期的報酬率與標準差各為多少？若你的投資組合變成 50% 台塑與 50% 南亞，則你的預期報酬率與標準差各為多少？若你的投資組合變成 10% 台塑與 90% 南亞，則你的預期報酬率與標準差各為多少？

(4分) 2. 在第 1 部份的三種投資組合中，那一種投資組合是最佳的投資組合？

四. 張三擬將其閒錢投資於黃金或公司債，設黃金的報酬率 (X_1) 與公司債的報酬率 (X_2) 均為常態分配且可用下列兩式加以表示：

$$X_1 \sim N(8\%, 10\%)$$

$$X_2 \sim N(7\%, 9\%)$$

張三希望他的報酬率小於 5% 的機會愈小愈好，請問張三應投資於黃金或公司債？

五. 李四最近收集 16 家銀行的三個月定存利率分別為 4.8%, 4.7%, 5.0%, 5.2%, 4.7%, 4.9%, 5.0%, 5.1%, 4.6%, 4.7%, 5.0%, 5.1%, 4.7%, 4.5%, 4.9%, 及 4.9%，經李四的計算，這 16 家銀行的三個月定存利率之平均數與標準差分別為 4.856% 與 0.20%。

(10分) 1. 請求算三個月定存利率的 95% 信賴區間。 $(t_{0.025}^{(15)} = 2.131)$, $t_{0.05}^{(15)} = 1.753$, $t_{0.025}^{(16)} = 2.120$, $t_{0.05}^{(16)} = 1.746$

(10分) 2. 請檢定下列之假說： $H_0: \mu = 5\%$, $H_a: \mu \neq 5\%$

六、王五為了探討今天股市的漲跌是否會影響明天股市的漲跌，他收集了最近 80 天的股市指數，並依據每天的漲跌與隔天的漲跌之關係，彙集成下表：

第 t 天的 股市指數 的變動	第 t 天的股市指數的變動		合計
	$\Delta P_t > 0$	$\Delta P_t \leq 0$	
$\Delta P_{t+1} > 0$	18	17	35
$\Delta P_{t+1} \leq 0$	19	26	45
合計	37	43	80

請利用上述資料檢定下面之假說：連續兩天的股市指數變動是獨立的 ($\chi^2_{0.05, 4} = 9.488$, $\chi^2_{0.05, 3} = 7.815$)

七、趙六觀察十位高雄市民之所得與消費資料如下：

樣本	所得(單位：萬元) X_i	消費(單位：十萬元) Y_i
1	10.0	15.0
2	18.0	23.5
3	28.0	25.0
4	7.0	12.5
5	13.0	13.0
6	16.0	12.0
7	22.0	19.0
8	15.0	16.0
9	20.0	21.0
10	10.0	8.0

經電腦計算，得到下面數據： $\sum X_i = 159.0$, $\bar{X} = 15.90$, $\sum Y_i = 165.0$

$\bar{Y} = 16.50$, $\sum X_i^2 = 2891.0$, $\sum Y_i^2 = 2993.5$, $\sum X_i Y_i = 2879.5$

(5分) 1. 請計算迴歸式 $Y_i = b_0 + b_1 X_i$ 中的 b_0 與 b_1

(5分) 2. 請計算相關係數 r^2 ，並解釋 r^2 的意義？

(5分) 3. 請檢定 $H_0: b_1 = 0.5$ vs $H_a: b_1 \neq 0.5$ ($t_{0.025}^{(8)} = 2.306$, $t_{0.025}^{(10)} = 2.228$, $t_{0.025}^{(9)} = 2.262$)