

Part I. Please answer the following questions in details and show the necessary calculations and explanations. (80%)

1. The table below contains NT dollar and US dollar interest rates and exchange rates information.
- (1) If there is a 20% tax on interest income for NT deposit, please show how a currency forward transaction can be used to increase after tax earning. (10%)
 - (2) Please explain the interest rate and exchange rate movements for NT dollar and US dollar when the above currency forward transactions are conducted. (10%)

Annual interest rates	Bid	Offer
NT dollar	8.5	10.5
US dollar	1.5	3.5
Exchange rates (NT\$/US\$)	Bid	Ask
Spot	34.5	34.7
12-month Forward	35.5	35.7

2. In the past decade, Taiwanese firms experienced many outward direct investments in different countries/markets in the world.
- (1) Please describe the International Product Life Cycle Theory in details; (10%)
 - (2) And please cite two products as examples of Taiwanese outward direct investments in two different countries/markets to explain the theory. (10%)
3. Please describe the formula in Samuelson's Multiplier-accelerator Interaction Theory (10%) and show how the theory can be used to explain stages of business cycle. (10%)
4. Recently the free way project between I-Lan and Hualien became a hot issue for people live in eastern Taiwan. The Wu family, Chen family, and Lee family own a fortune of 1000 each before undertaken of the above project. Assuming their fortunes would be changed to 2000, 900, and 350 respectively after the above project were done, should the above project be undertaken? (10%) Please explain your answers in both Kaldor and Pareto perspectives. (10%)

Part II. Please choose the best answer for each of the following questions. (20%)

1. If the rate of inflation is higher than anticipated,
 - (A) lenders will gain at the expense of borrowers and workers will gain at the expense of employers.
 - (B) borrowers will gain at the expense of lenders and workers will gain at the expenses of employers.
 - (C) lenders will gain at the expense of borrowers and employers will gain at the expense of workers.
 - (D) borrowers will gain at the expense of lenders and employers will gain at the expense of workers. (5%)

2. Greater optimism about expected profits from potential investment projects
 - (A) shifts the investment demand curve to the right.
 - (B) shifts the investment demand curve to the left.
 - (C) causes a movement up and to the left along the investment demand curve.
 - (D) causes a movement down and to the right along the investment demand curve. (5%)

3. Allocative efficiency occurs when
 - (A) marginal revenue equals minimum average variable cost.
 - (B) average revenue equals minimum average fixed cost.
 - (C) marginal social cost equals marginal social benefit.
 - (D) marginal revenue equals marginal social benefit. (5%)

4. If the price elasticity of demand for an input such as labor is very price elastic,
 - (A) the input must be unique because its price will remain relatively constant.
 - (B) the input must be inefficient.
 - (C) there must be close substitutes for the input which are readily available.
 - (D) it is a short-run condition since demand is more price inelastic in the long run. (5%)

-- End of Exam --

1. 何謂代理關係(Agency Relationship)，其衍生的問題有那些？(20%)
2. 企業應維持適度的衝突，以達成組織的最高績效。當組織的衝突程度不足時，可採取那些激發的方法？(20%)
3. 何謂管理方格理論(Managerial Grid Theory)？其理念和一般人常說的「做人比做事重要」有何關聯？(30%)
4. 何謂職務說明書(Job Description)？有何用處？試寫出一份行銷專員(Marketing Specialist)的職務說明書。(30%)

個案 1 : Starbucks lays out aggressive global growth plans

SEATTLE

Think there's already a Starbucks on every corner? Think again.

Starbucks is opening coffee shops at the rate of about 3 1/2 a day worldwide, and that figure could increase, chief executive Orin Smith told shareholders at the company's annual meeting.

The long-term plan is to have about 25,000 stores worldwide — more than triple the nearly 8,000 stores the coffee retailer has right now. And even that amount seems a little "light," according to Starbucks chairman Howard Schultz.

To accommodate those plans, the

As is usual for Starbucks, the meeting was more show-and-tell than sales figures. Against a set built to look like the first Starbucks store at Pike Place Market in Seattle, Schultz started things off by conducting a band of percussionists — with Smith joining in on a massive pair of drums.

During the nearly three-hour meeting, several of the company's executives sang and danced — literally — in skits played on a large-screen projector.

The crowd, which had feasted on pastries, lattes and other treats, was generally adoring, with one shareholder even suggesting the crowd begin a cheer for the company.

company, which already employs more than 80,000 people, is hiring 250 people a day, the executives told a packed house of thousands of shareholders Tuesday.

"Both domestically and internationally, we probably underestimated the size of the global opportunity that we have," Schultz said in an interview after the meeting.

The Seattle-based company's aggressive expansion plans go far beyond just coffeehouses. Starbucks' future will include making money on everything from bottled coffee drinks — which the company hopes to start selling internationally within a year — to music, the executives said.

But two shareholders berated the company for not offering dividends. Smith and Schultz both said Starbucks is considering such a plan, but that its current growth rate means that it may need any cash on hand.

The meeting also featured a live performance by Emmylou Harris — whose favorite songs will be on an upcoming Starbucks CD — as well as acrobats, videos from executives and a testimonial from a longtime employee, roaster Tom Walters.

Recounting the changes in his 22 years with the company, Walters said: "I just can't believe there are so many Starbucks stores."

問題 1 : 請扼要摘述上文內容(10%)。

問題 2 : 請你詳列文中所提策略之可能前提假設(15%)，並依此前提假設進行執行此策略之利弊分析(20%)。

個案 2：電信三雄爭霸 攘外須先安內

「我們要做電信 Top 1，對不對」遠傳電信董事長徐旭東在上周五晚上的「新遠傳新紀元」誓師大會中，穿著繡有彩色「1」字的唐衫，手裡拿著鼓棒，大聲的向 3,000 餘位員工喊出今年要揚眉吐氣的目標。

不僅是徐旭東要做電信 Top 1，台灣大哥大董事長蔡明忠在入主後，也曾向員工許下要重新奪回電信一哥的寶座，「要做台灣 No.1」。而中華電信董事長賀陳旦，面對兩位強勁對手的嗆聲，臉上仍笑瞇瞇說出，「中華電當然一直要做龍頭老大」。

綜合電信三雄的營收、客戶貢獻度與獲利能力等指標，業界公認，中華電仍然維持第一名的領先地位，至於台灣大與合併和信後的新遠傳，今年顯然有一番激戰。

不過，在對外開疆拓土爭做第一名之際，電信三雄卻都有著禍起蕭牆的隱憂。新遠傳面臨整合原遠傳與和信的兩大派系員工，台灣大則存在著歐美空降兵團管理本土草莽陣營的磨合，中華電信在走入民營化之際，卻得背負一批約 5,000 位 50 歲以上的員工，讓龍頭老大難以展現迅猛的快狠準，隱約浮現草食雷龍的溫和。

人才是公司最重要的資產，但也是電信三雄在推動公司前進時，急需解決的問題之一。

問題：請評述電信三雄應如何進行三種截然不同之人力資源整合管理。Hint：你可以提出一個 universal model 或 contingent model 說明之(35%)。

個案 3：賣 NB 像賣水果？

惠普個人電腦事業群副總裁暨總經理莊正松平時談吐斯文，但在打促銷戰時，莊正松馬上顯露出業務人員本色。他說：「在台灣這個殺戰市場，也只有把筆記本型電腦當做水果、海鮮來賣！」

莊正松算是惠普頭號的狠角色，為了達到業績目標，可以拚到底；莊正松原本認為，筆記本型電腦是高科技產品，業者之間的競爭手段，好歹也應該維持一定的格調。

但這次春展開展以來，宏基、明基先後推出所謂的「暴動價」及「鎮暴價」機種，IBM 又使出狠招以六折的價格推出與惠普印表機相容的碳粉匣；在「新仇舊恨」交織的情況下，莊正松緊急與亞太總部溝通，決定惠普筆記本型電腦將全線降價。

問題：請評述 NB 產業的特性與行銷策略運用的關係(20%)。

一、複選題 (每題各 2 分) (共 20 分)

- (1) 欲決定統計假設之棄卻域 (rejection region)，則下列敘述何者為真？
- (A) 必須先設定顯著水準 α 。
 - (B) 必須先設定型 II 誤差之機率 β 。
 - (C) 必須先同時設定 α 與 β 。
 - (D) α 與 β 都不必先設定。
 - (E) 視題目而定。
- (2) 下列有關統計量之抽樣分配的敘述何者正確？
- (A) 統計量等於所興趣的參數之機率。
 - (B) 所有相同大小的可能樣本所計算出的統計量之機率分配。
 - (C) 所有相同大小的可能樣本所含的數值之機率分配。
 - (D) 所有相同大小的可能樣本所含的數值之直方圖。
 - (E) 以上皆非。
- (3) Which of the following statement is /are NOT correct?
- (A) The Chi-square goodness-of-fit test can be used to test whether a particular model for a population distribution does or does not fit the underlying data.
 - (B) The Chi-square test can be used to test whether the variance of a normal random variable is equal to a particular constant.
 - (C) The sign test can be used to test whether two groups of data come from the same distribution.
 - (D) The Mann-Whitney U test can be used to test whether a sequence of defective items from a manufacturing process indicates non-randomness.
 - (E) None of the above.
- (4) If x is an exponential random variable, then what is $P(x < -0.5)$?
- (A) 0.2.
 - (B) 0.3.
 - (C) 0.67.
 - (D) Not enough information given.
 - (E) None of the above.
- (5) It is always true, regardless of the sample size drawn, that
- (A) the mean of the sampling distribution of sample means is equal to the mean of the population from which the samples were drawn.
 - (B) the standard error of the mean will exceed the standard deviation at the population from which samples are drawn.
 - (C) the standard error will increase as the sample size increases.
 - (D) the sampling distribution of the mean has precisely the same scatter as the parent population from which the samples were drawn.
 - (E) All of the above.

(6) Which of the following statements is true about confidence intervals for a fixed sample of size n ?

- (A) If the population standard deviation is known, all 95% confidence intervals will have the same width.
- (B) If the population standard deviation is known, all 95% confidence intervals will have the same midpoint and the same width.
- (C) If the population standard deviation is not known, all 95% confidence intervals will have the same midpoint but different widths.
- (D) If the population standard deviation is not known, all 95% confidence intervals will have different midpoints but equal widths.
- (E) None of the above.

(7) Multi-co-linearity refers to a condition where:

- (A) Several independent variables can be used to predict a response, y .
- (B) More than one indicator variable is required to represent a qualitative variable having several classes.
- (C) More than one response variable needs to be predicted from the some set of independent variables.
- (D) The observations of the independent variables are highly correlated.
- (E) The random errors are serially correlated.

(8) Which of the following about regression analysis is/are true?

- (A) R^2 is a measure of the predictive capability of the built regression model.
- (B) The adjusted R^2 is a better measure than the usual R^2 .
- (C) R^2 is equal to SSR/SST .
- (D) $E(MSE) = \sigma^2$.
- (E) All of the above.

(9) A paired-difference test is a

- (A) simple example of a chi-square goodness-of-fit test.
- (B) simple example of a randomized block design.
- (C) simple example of a completely randomized experiment.
- (D) simple example of a chi-square homogeneity test.
- (E) All of the above.

(10) It is difficult to project cyclical fluctuations accurately because

- (A) cycles in business series usually have variations in duration and amount of fluctuation.
- (B) trend may obliterate the entire cyclical effect.
- (C) seasonal effects cause considerable distortion in the cyclical components in nearly every instance.
- (D) cyclical effects are strongly influenced by managerial decisions.
- (E) cyclical effects are unpredictable.

二、計算題 (共 80 分)

- (1) 共同基金之投資人中, 10%認為投資股票「很安全」, 60%認為「安全」, 25%認為「不很安全」, 5%認為「完全不安全」。某市調公司抽查 500 位共同基金之投資人詢問其對公司債安全性之看法, 得資料如下:

對公司債安全性之看法	人數
很安全	54
安全	342
不很安全	84
完全不安全	20
總計	500

試以 $\alpha = 0.05$ 檢定:

- (A) (10%) 投資人對公司債安全性之態度是否與對股票之態度有差異? (提示:

$$\chi_{0.05}^2(3) = 7.815)$$

- (B) (5%) 投資人認為公司債安全(“很安全”與“安全”之總合)的人數比例是否超過七成? (提示: $Z_{0.05} = 1.645$)

- (C) (5%) 試求投資人認為公司債安全之母體比率 95% 信賴區間? (提示: $Z_{0.025} = 1.96$)

- (2) 設 X_1, X_2, \dots, X_n 為一組來自常態 $N(\mu, \sigma^2)$ 母體之隨機樣本。

- (A) (10%) 試分別求參數 μ 與 σ^2 之 MLE 估計元, 記為 $\hat{\mu}, \hat{\sigma}^2$ 。

- (B) (5%) 試寫出 $\hat{\mu}$ 及 $\frac{n\hat{\sigma}^2}{\sigma^2}$ 之抽樣分配。

- (C) (5%) 試計算 $E(\hat{\sigma}^2)$ 及 $Var(\hat{\sigma}^2)$ 。

- (3) Let X be a random variable with $E(X) = \mu$, and $Var(X) = \sigma^2$. Suppose that $Y = H(X)$.

Show that

(A) (5%) $E(Y) \cong H(\mu) + \frac{H''(\mu)}{2} \sigma^2$.

(B) (5%) $Var(Y) \cong [H'(\mu)]^2 \sigma^2$.

Where $E(\cdot)$ and $Var(\cdot)$ denote expectation and variance.

- (4) (15%) If we know the relationship between X and Y is

$$Y^a = c \ln(X+b) \text{ where } a \neq 0 \text{ and } c \neq 0.$$

Can we do simple linear for a random sample data $(X_i, Y_i), i = 1, 2, \dots, n$? If yes, show how; if no, tell the reason.

(5) The data gathered for a two factorial design follow.

		Treatment 1		
		A1	A2	A3
Treatment 2	B1	23	21	20
	B2	27	24	26
		28	27	27

Use the two-way ANOVA to analyze these data. Let the significance level $\alpha = 0.01$.

(A) (5%) Test whether or not row means all are equal.

(B) (5%) Test whether or not column means all are equal.

(C) (5%) Test whether or not the intersection effects are zero.

(Hint: $F_{0.01}(1,6) = 13.75$, $F_{0.01}(2,6) = 10.92$, $F_{0.01}(3,6) = 9.78$

$F_{0.01}(1,12) = 9.33$, $F_{0.01}(2,12) = 6.93$, $F_{0.01}(3,12) = 5.95$)