

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：經濟學【企管系企管甲班碩士班甲組、乙組、丙組】

題號：441001

※本科目依簡章規定「不可以」使用計算機(混合題)

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壹、單選題〈1 至 10 題為中文題，每題 3 分；11 題至 20 題為英文題，每題 4 分；總計 70 分〉

- 下列何者總體經濟變數為流量(flow)變數？
 - 外匯存底 (foreign reserve)
 - 經常帳餘額 (current account balance)
 - 人文財富 (human wealth)
 - 金融性財富 (financial wealth)
- 若 P_x 為 X 國的一般物價水準， P_y 為 Y 國的一般物價水準， e 為美式報價的名目匯率(即一元 X 國的通貨所能兌換的 Y 國通貨數量)，則
 - $\frac{e \cdot P_x}{P_y}$ 為名目變數
 - $\frac{e \cdot P_x}{P_y}$ 表示一單位 X 在 Y 國可以換到 Y 的單位數
 - $\frac{P_x}{e \cdot P_y}$ 表示一單位 Y 在 X 國可以換到 X 的單位數
 - 以上(a)(b)(c)敘述都不正確
- 對於存款者(savor)而言，當(當期)利率下降時，下列何者敘述正確？
 - 因所得效果而未來消費增加
 - 因所得效果而當期消費減少
 - 因替代效果而當期消費減少
 - 因替代效果而未來消費增加
- 下列何者敘述正確？
 - 未受借貸限制下做兩期跨期最適選擇的消費者會有平滑消費(consumption smoothing)的動機；換言之，不管是當期或未來所得增加，消費者都會盡量平均分配到兩期消費
 - 平滑消費的動機是因為每期效用函數(instantaneous utility function)具有邊際效用遞減
 - 根據恆常所得(permanent income hypothesis)的消費理論的消費者，如果中了統一發票三獎得到一萬元，此消費者會把這一萬元都儲蓄起來
 - 以上(a)(b)(c)敘述都正確。
- 長期下，如果政府支出與政府定額稅稅收等量增加，將使
 - 利率下降，投資上升
 - 利率上升，投資下降
 - 利率不變，投資不變
 - 以上(a)(b)(c)敘述都不正確。
- 若生產函數為 $Y=40L-0.5L^2$ ，其中 L 為總合就業量；總合勞動供給為 $20+3w$ ，其中 w 為實質工資，則均衡的實質工資為
 - 20
 - 10
 - 5
 - 以上(a)(b)(c)皆非

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7. 下列何者因素會使 IS 曲線 (IS curve) 右移？
- 所得上升
 - 實質利率下降
 - 預期景氣復甦
 - 以上(a)(b)(c)皆是
8. 假設通貨淨額-存款比率 (currency-deposit ratio) 為 0.25，準備-存款比率 (reserve-deposit ratio) 為 0.25，則貨幣乘數 (money multiplier) 為
- 1.5
 - 2.0
 - 2.5
 - 3.0
9. 經濟體系的內在自我調整(self-correcting property of the economy)指的是產出缺口(output gap)最終會因為下列何者而消除？
- 物價水準上升或物價水準下跌
 - 只能透過物價水準下跌
 - 增加或降低潛在產出(potential output)
 - 財政或貨幣政策
10. 下列何者表示經濟體系達到瓦拉斯均衡(Walrasian equilibrium)狀態？
- 如果經濟中有 n 個市場， n 個市場都達到供需均衡
 - 如果經濟中有 n 個市場， n 個市場的超額需求的總和等於 0
 - 如果經濟中有 n 個市場， n 個市場的超額供給的總和等於 0
 - 以上(a)(b)(c)都不正確
11. Nepal imports most of its fuel supplies from India. In 2015, India imposed a blockade (封鎖), and hence only 5% of fuel Nepal needs can go through their border. What would happen to the market of **bicycles** in Nepal?
- The equilibrium quantity would decrease but the equilibrium price would increase.
 - The equilibrium quantity would increase but the equilibrium price would decrease.
 - The equilibrium quantity would increase but the equilibrium price would be uncertain.
 - The equilibrium quantity and price would both increase.
12. Betel nuts (檳榔) are **inferior goods** for Karl. Assume that the government imposes a per-unit tax of NT10 in the market of betel nuts. How will Karl change the amount of betel nuts he consumes?
- He will increase his consumption on betel nuts.
 - He will decrease his consumption on betel nuts.
 - He will not change the amount of betel nuts he consumes.
 - His consumption on betel nuts will be uncertain.
13. Assume that the utility function for Butt-head (大頭蛋) is $U(X, Y) = 2X + 3Y$; he has income \$140. The price for X is \$2/unit, and the price for Y is \$4/unit. Which statement below is **CORRECT**?
- If Butt-head has income \$112, he should buy 24 units of X and 16 units of Y.
 - If Butt-head has income \$112, he should buy 14 units of X and 21 units of Y.
 - If Butt-head has income \$120, he should buy only 30 units of Y.
 - If Butt-head has income \$120 and the price for X becomes \$3/unit (the price for Y is still \$4/unit), he should buy only 30 units of Y.

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14. A factory used 10 units of labor and 5 units of capital in the last year, and their output is 100 units. This year, they use 5 units of labor and 10 units of capital, and their output is still 100 units. They plan to use 10 units of labor and 20 units of capital in the next year; they expect that their output will become 180 units. Which statement below is **CORRECT**?
- Their production function is increasing return to scale.
 - Their production function is constant return to scale.
 - Their production function is decreasing return to scale.
 - Based on this information, we cannot know whether their production function is increasing, constant, or decreasing return to scale.
15. Assume that a monopoly has a marginal cost function, $MC = 10$ (a horizon line). When they maximize their profit, they set a price where the demand they are facing has an own-price elasticity of -2. What is the price they set?
- 12
 - 16
 - 20
 - 24

16. South China Sea is surrounded by six countries. No country owns the sea now. Each country can establish offshore aquaculture fishery (海上箱網養殖漁業) that earns \$5 billion per year, or build an inshore fishing fleet (近海捕撈船隊) that works on South China Sea. The value of fishes they can catch from South China Sea each year depends on the number of fleets operating on the sea, as shown in the following table. If each fleet can **freely** operate on the sea, how many countries will build their inshore fishing fleet?

Number of fleets	The value of fishes each country can catch
1	15 billion
2	13 billion
3	11 billion
4	8.5 billion
5	5.5 billion
6	3 billion

- 5
 - 4
 - 3
 - 2
17. Refer to problem 16. If China owns South China Sea and charges a uniform fee on each country who sends a fleet operating on the sea, what is the **maximized revenue** (including revenue from the fee and revenue from aquaculture fishery or the fishing fleet) China can earn in this situation?
- 23 billion
 - 21 billion
 - 18 billion
 - 16 billion
18. Which statement below is **WRONG**?
- The cost merchants pay for guards to prevent from being robbed in trade routes is one kind of transaction costs.
 - From Douglass North's viewpoint, one important role of governments is to prepare guards for merchants, which keep the order of markets (維持市場秩序).
 - From Douglass North's viewpoint, governments do not need the help from scholars to keep the order of markets.
 - In human history, we can find that governments do not necessarily try to keep the order of markets and promote trade (such as international trade).

背面有題

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19. Below is a game with a payoff matrix, where Costco and Walmart decide the location of their new branch in Boston area. What is the payoff of the pure-strategy Nash equilibrium/equilibria in this game?

- a. (340,340)
- b. (340,340) & (350,350)
- c. (350,350) & (320,380)
- d. (350,350)

		Costco	
		<i>Newton</i>	<i>Quincy</i>
Walmart	<i>Dedham</i>	(320,380)	(340,320)
	<i>Waltham</i>	(290,330)	(340,340)
	<i>Medford</i>	(350,350)	(330,320)

20. Refer to problem 19. If **Costco moves first**, what is the sub-game perfect equilibrium (SPE: the equilibrium you get by backward induction in an extensive form game) in this game?

- a. Costco chooses Newton, and Walmart chooses Dedham.
- b. Costco chooses Newton, and Walmart chooses Medford.
- c. Costco chooses Quincy, and Walmart chooses Dedham.
- d. Costco chooses Quincy, and Walmart chooses Waltham.

貳、填充題(每小格 4 分, 共 20 分; 只需填寫答案)

1. 有一凱因斯封閉經濟體系如下:

消費函數： $C = 40 + 0.5(Y - T) - 500r$

投資函數： $I = 40 - 500r$

實質貨幣需求： $L(Y, r) = 0.5Y - 500r$

假設 $T = G = 20$, 且 $M = 300$ 。

(a) 則 IS 的方程式為__ (1) __, AD 的方程式為__ (2) __。

(b) 若物價水準 $P = 10$, 請求出短期產出 $Y =$ __ (3) __。

2. 有一大型開放經濟體系, 國內儲蓄 $S^d = 1200 + 1000r^w$, 國內投資支出 $I^d = 1000 - 500r^w$, 其中 r^w 為國際利率。外國儲蓄 $S_{For}^d = 1000 + 1000r^w$, 外國投資支出 $I_{For}^d = 1800 - 500r^w$ 。則均衡的國際利率 $r^w =$ __ (4) __, 本國的經常帳餘額 $CA =$ __ (5) __。

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參、 計算申論題〈共計 10 分；請簡附計算或推導過程〉

1. (10 pts) You are an investor, and recently got a house in NT 15 million, and after having decorated this house (the cost is NT 1 million), you want to sell it to someone else. If you can sell this house immediately, you can get NT 18 million. However, since the average price of houses is expected to decrease one year later, if you cannot sell it in this year, you can sell it only in NT 15 million. Although you work hard, you have $1/2$ chance to sell it in this year. The cost of working hard for you is NT 100,000. You can also hire an professional agent (仲介). If the agent works hard, you have $1/2$ chance to sell the house in this year (and hence you can get NT 18 million from this sale), but you still have $1/2$ chance to sell this house in the next year (and hence you can get only NT 15 million). The agent has to pay NT 20,000 (for advertising, fuel, etc.) if the agent works hard. If he does not work hard, there is no cost for him, but you have only $1/10$ chance to sell the house in this year. Assume that the agent can still get NT 50,000 from another contract if he rejects your offer.
 - a. Is hiring an agent is better than doing this job by yourself? If the answer is yes, how should you design your contract? (5 pts)
 - b. Assume that there is a popular agent, and you have to pay him at least NT100,000 (he can get NT 100,000 from another contract if he rejects your offer). Yet, if this agent works hard, **your chance to sell this house in this year becomes $3/5$** ; the cost of working hard for this agent is still NT 20,000. Of course, if he does not work hard, your chance to sell this house in this year remains $1/10$. Should you hire this popular agent instead of a general agent? (5 pts)

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選擇題(僅有單一正確答案，40 題，每題 2.5 分，共計 100 分)

- () 1. 資料量規模巨大到無法透過人工在合理時間內達到擷取、管理、處理、並整理成為人類所能解讀的形式的資訊稱為？(A)大數據 (B)巨量資料 (C)海量資料 (D)大資料 (E)以上皆是。
- () 2. 絕對偏差=|平均值-目標值|可用來衡量下列何者？(A)精密度 Precision (B)準確度 Accuracy (C)不良率 (D)覆蓋率 (E)以上皆非。
- () 3. 精密度與下列何者有直接相關？(A)平均值 (B)目標值 (C)變異數 (D)不良率 (E)以上皆非。
- () 4. 下列何種機率分配的平均值與變異數相等？ (A)常態 (B)超幾何 (C)二項 (D)卜瓦松 (E)以上皆非。
- () 5. 令 N 表母體個數， n 表樣本大小，則有限母體矯正項等於？ (A) $(N-n)/(N-1)$ (B) $N/(N-n)$ (C) $(n-1)/(N-1)$ (D) n/N (E)以上皆非。
- () 6. Excel 中的函數 Rand() 所產生的隨機亂數會符合下列何種機率分配？ (A)標準常態 (B)超幾何 (C)二項 (D)0~1 均勻 (E)以上皆非。
- () 7. 隨機抽取某公司 11 位新進員工月薪(萬元)如下：{4.2, 2.4, 2.5, 2.7, 2.8, 2.9, 3.0, 3.5, 3.6, 3.9, 4.1}，試求月薪 3.0 的百分位等級(percentrank)？ (A)0.2 (B)0.4 (C)0.5 (D)0.6 (E)以上皆非。
- () 8. 同上題資料，試求該組資料的 30 百分位(percentile)？ (A)2.7 (B)2.8 (C)3.0 (D)3.9 (E)以上皆非。
- () 9. 擲三個公正骰子的隨機試驗中，令隨機變數 Y 表三個骰子出現點數總和，則 $P[Y=18]$ ？ (A)0/216 (B)1/216 (C)10/216 (D)18/216 (E)以上皆非。
- () 10. 某科期中考成績全班每位同學均開跟號乘十，則全班平均分數與標準差是否會改變？ (A)僅改變平均分數 (B)僅改變變異數 (C)兩者均不會改變 (D)兩者均會改變 (E)以上皆非。
- () 11. 由常態分配 $N(\mu, \sigma^2)$ 中抽取一組隨機樣本 X_1, X_2, \dots, X_n ，平方和為 $SS = \sum_{i=1}^n (x_i - \bar{x})^2$ ，且 $E(SS) = (n-1)\sigma^2$ ，則下列何者為 σ^2 的無偏估計量？ (A)SS (B)SS/n (C)SS/(n-1) (D)SS² (E)以上皆非。
- () 12. 自標準常態母體抽取樣本大小 $n=5$ 的隨機樣本，試樣本平均值抽樣分配的期望值與變異數？ (A)(0,1) (B)(0,1/5) (C)(5,5) (D)(0,5) (E)以上皆非。
- () 13. 假設母體呈均勻分配且其平均值為 μ 變異數為 σ^2 ，今抽取 $n=50$ 的隨機樣本並計算其樣本平均值，令 N 表常態分配，則依據何種理論可得知 \bar{X}_n 的抽樣分配近似於 $N(\mu, \sigma^2/n)$ ？ (A)中央極限定理 (B)均勻定理 (C)隨機定理 (D)直交分解定理 (E)以上皆非。
- () 14. 假設變異數未知，欲推估單一母體的平均值應採用何種抽樣分配？ (A)Z (B)t (C)F (D) χ^2 (E)以上皆非。
- () 15. 假設檢定中 H_0 vs H_1 ，令 A 表接受區、R 表棄卻區，則 $P[R|H_1]=?$ (A)型一誤機率 α (B)型二誤機率 β (C)檢定力 (D)誤判力 (E)以上皆非。

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- () 16. 令顯著水準為 α ，則雙尾檢定中判定為棄卻虛無假設的標準為何？ (A) 雙尾 $p\text{-value} < \alpha$ (B) 雙尾 $p\text{-value} > \alpha$ (C) 單尾 $p\text{-value} < \alpha$ (D) 單尾 $p\text{-value} > \alpha/2$ (E) 以上皆非。
- () 17. 假設檢定中，當其他條件保持固定，令 H_0 與 H_1 的距離增加時，會使下列何者變大？ (A) 型一誤機率 α (B) 型二誤機率 β (C) 檢定力 (D) 信賴區間 (E) 以上皆非。
- () 18. 欲檢定三個以上(含)獨立常態母體之平均是否相等前應先檢定下列何者是否相等？ (A) 全距 (B) 中位數 (C) 眾位數 (D) 變異數 (E) 以上皆非。
- () 19. 欲檢定三個以上(含)獨立且同質常態母體之平均是否相等，應採用何種檢定？ (A) Z (B) t (C) F (D) χ^2 (E) 以上皆非。
- () 20. 假設原始資料符合某種特定分配，再依據分配的參數來進行資料分析稱為何種統計方法？ (A) 有母數 (B) 無母數 (C) 大數法 (D) 小樣本法 (E) 以上皆非。
- () 21. 下列何種工具可以協助尋找線性模式中的影響因子(自變數)？ (A) 魚骨圖 (B) 折線圖 (C) 散佈圖 (D) 決策樹 (E) 以上皆非。
- () 22. 欲進行無重複兩因子變異數分析時，應先確認下列何者實際不存在而將其視為誤差項？ (A) 交互作用 (B) 單因子主效果 (C) 截距 (D) 總變異 (E) 以上皆非。
- () 23. 有重複雙因子變異數分析中，A 因子有 3 個水準，B 因子有 2 個水準，且有 4 個重複，則 A 與 B 交互作用的自由度為多少？ (A) 2 (B) 6 (C) 12 (D) 18 (E) 以上皆非。
- () 24. 有重複雙因子變異數分析中，繪製平均值的線形圖(或折線圖)可觀察兩因子之間的 (A) 常態效果 (B) 交互效果 (C) 同質效果 (D) 獨立效果 (E) 以上皆非。
- () 25. 變異數分析中若主效果顯著，則可再進行何種檢定？ (A) Pre-test (B) Post-test (C) Pre hoc (D) Post hoc (E) 以上皆非。
- () 26. 某公司欲檢定 A 產品之強度在不同生產線是否有差異，今分別從四條生產線各隨機抽取 10 件產品並量測其強度，經計算後得到總變異平方和 $SST=420$ ，誤差平方和 $SSE=360$ ，則單因子變異數分析表中的 F 值=? (A) 1 (B) 2 (C) 5 (D) 10 (E) 以上皆非。
- () 27. 令 $Y_{ij} = \mu + \delta_i + \beta x_{ij} + \varepsilon_{ij}$ $i=1, \dots, m; j=1, \dots, n; \sum \delta_i = 0; \beta$ 為共同斜率 $\varepsilon_{ij} \sim iidN(0, \sigma^2)$ ，此一模式屬於下列何種分析？ (A) 變異數分析 (B) 迴歸分析 (C) 共變異數分析 (D) 卡方分析 (E) 以上皆非。
- () 28. 民意調查中，以卡方檢定十個行政區間有效受訪樣本次數之分配比例是否符合母體人口數的分配比例，則卡方分配自由度為？ (A) 10 (B) 9 (C) 8 (D) 7 (E) 以上皆非。
- () 29. ABC 貸款公司希望比較 A 與 B 兩家鑑價公司在進行資產評估時是否有差異，於是挑選 10 間房屋讓兩家公司分別進行估價，則應採用何種方法檢定兩家平均值是否相等？ (A) 兩獨立同質母體 (B) 兩獨立異質母體 (C) 成對母體 (D) 單一母體 (E) 以上皆非。
- () 30. A 君每天搭乘 6:30 捷運上班，經長期記錄觀察從家裡到月台所需時間呈常態分配且平均值為 15 分鐘，標準差為 3 分鐘。某日因晚睡晚起 6:15 才出門，則遲到機率為何？ (A) 0.01 (B) 0.05 (C) 0.1 (D) 0.5 (E) 以上皆非。

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：商用統計學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】題號：441002
 ※本科目依簡章規定「不可以」使用計算機(選擇題) 共 4 頁第 3 頁

- () 31. 迴歸模式中誤差(ε_i)的假設為 (A) iidN(0, σ_{ij}^2) (B) N(0, σ_i^2) (C) N(0, σ_{ij}^2) (D) iidN(0, σ^2)
 (E) 以上皆非，其中 N 表常態分配。
- () 32. 複迴歸中，下列何者會造成多重共線性？ (A) Variance inflation factor > 10
 (B) Condition index > 30 (C) eigenvalues 接近 0 (D) 自變數間具高相關 (E) 以上皆是。
- () 33. 簡單迴歸中最短的信賴區間在哪裡？ (A) $X = \bar{x}$ (B) $X = 0$ (C) $X = \infty$ (D) $Y = 0$ (E) 以上皆非。

請依據【Case Study】報表回答 34-40 題：

- () 34. Correlation(X, X_2) = ? (A) 0.9816 (B) 0.9389 (C) 0.8564 (D) 1 (E) 以上皆非。
- () 35. Standard Error = 16.0234 可由下列何者開根號得之？ (A) MS Regression
 (B) MS Residual (C) Adjusted R Square (D) F (E) 以上皆非。
- () 36. 僅含一個自變數 X 的簡單迴歸中，X 的迴歸係數等於？ (A) 45.318 (B) 19.389
 (C) 85.513 (D) -80.713 (E) 以上皆非。
- () 37. 包含二個自變數 X, X_2 的複迴歸中，X 的迴歸係數等於？ (A) 45.318 (B) 19.389
 (C) 85.513 (D) -80.713 (E) 以上皆非。
- () 38. 複迴歸中，X 迴歸係數信賴區間的 Lower 95% 最接近？ (A) -124.3896 (B) 12.7936
 (C) 15.8786 (D) -80.7133 (E) 以上皆非。
- () 39. 比較上述兩迴歸模式，X 的迴歸係數由正轉負其原因為何？ (A) 多重共線性 (B) 貢獻性
 (C) 自變數太少 (D) 資料太少 (E) 以上皆非。
- () 40. 由 $P[F > 106.64746]$ 可求得 Significance F = 5.7191E-06，則 ? 應為 (A) = (B) < (C) >
 (D) ≠ (E) 以上皆非。

【Case Analysis】 An artificial data of Y and X are given as below, and X_2 is the square of X.

【Data】

Y	X	X_2
2.72	1	1
4.48	1.5	2.25
7.39	2	4
12.18	2.5	6.25
20.09	3	9
33.12	3.5	12.3
54.60	4	16
90.02	4.5	20.3
148.41	5	25
244.69	5.5	30.3

【Q2. Correlation】

	Y	X	X_2
Y	1		
X	0.8654	1	
X_2	0.9389	0.9816	1

背面有題

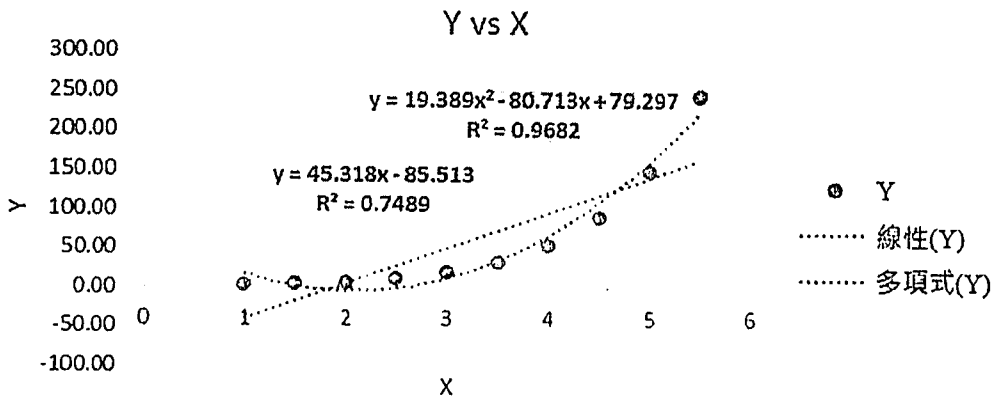
國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：商用統計學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】題號：441002

※本科目依簡章規定「不可以」使用計算機(選擇題)

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【Scatter Chart】



【Quadratic Regression】

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.983984
R Square	0.9682244
Adjusted R Square	0.9591457
Standard Error	16.023424
Observations	10

ANOVA

	df	SS	MS	F	Significance F
Regression	2	54763.497	27381.748	106.64746	5.7191E-06
Residual	7	1797.2508	256.75011		
Total	9	56560.748			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	79.296859	26.81957	2.956679	0.0212048	15.87865304	142.71506
X	-80.713372	18.470691	-4.3698079	0.0032748	?	-37.037127
X2	19.389377	2.7893201	6.9512916	0.0002209	12.79368346	25.985071

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals	Standard Residuals
1	17.972864	-15.254582	-1.0794865
2	1.8528995	2.6287896	0.1860256
3	-4.5723762	11.961432	0.8464476
4	-1.3029633	13.485457	0.9542949
5	11.661138	8.4243986	0.5961504
6	34.319929	-1.2044767	-0.0852345
7	66.673408	-12.075258	-0.8545025
8	108.72158	-18.704444	-1.3236151
9	160.46443	-12.051273	-0.8528052
10	221.90198	22.789955	1.6127253

PROBABILITY OUTPUT

Percentile	Y
5	2.7182818
15	4.4816891
25	7.3890561
35	12.182494
45	20.085537
55	33.115452
65	54.59815
75	90.017131
85	148.41316
95	244.69193

~ END ~

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：管理學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】 題號：441004

※本科目依簡章規定「不可以」使用計算機(混合題)

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※請勿於試題紙上作答

一、單選題，每題 2.5 分，不倒扣，合計 50 分

1. In general, a firm is more aware of competitors who have similar resources and who:
 - A) have low market dependence
 - B) compete against the firm in multiple markets
 - C) are late movers
 - D) have low market commonality
 - E) are relatively small
2. Nunya is a computer software company that employs highly intelligent, but somewhat unusual people. The regular distribution of lollipops, toys, or treats every Friday is an example of a _____ that helps reinforce Nunya's culture.
 - A) story
 - B) ritual
 - C) material symbol
 - D) symbolism
 - E) tool
3. The structure that creates dual lines of authority is the _____.
 - A) team structure
 - B) bureaucracy
 - C) matrix structure
 - D) virtual organization
 - E) simple structure
4. All of the following are considered generic business-level strategies EXCEPT:
 - A) differentiation
 - B) vertical integration
 - C) cost leadership
 - D) focus
 - E) integrated cost leadership/differentiation
5. According to Lewin, the stage of the change process where the new change is made permanent is _____.
 - A) changing
 - B) unfreezing
 - C) refreezing
 - D) movement
 - E) equilibrium
6. Which one of the following frameworks/models is most suitable to analyze a firm's macro/general environment:
 - A) Michael Porter's Five Forces Model
 - B) Ansoff's Growth Matrix
 - C) PEST (or PESTLE/PESTIN) Framework
 - D) BCG Model
 - E) TAM Model

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：管理學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】 題號：441004

※本科目依簡章規定「不可以」使用計算機(混合題)

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7. The degree to which an individual believes that performing at a particular level will obtain a desired outcome is defined by expectancy theory as what kind of relationship.
 - A) effort-performance
 - B) performance-reward
 - C) reward-personal goal
 - D) effort-satisfaction
 - E) agent-actor
8. The concept "success breeds success" captures the essence of:
 - A) social facilitation
 - B) goal congruence
 - C) social loafing
 - D) team efficacy
 - E) self-serving bias
9. Any incompatibility between two or more attitudes or between behavior and attitudes results in _____.
 - A) organizational dissonance
 - B) cognitive dissonance
 - C) attitudinal clarification
 - D) values clarification
 - E) affective reactance
10. What is generally the result of groupthink?
 - A) higher-quality decisions
 - B) more risky decisions
 - C) less critical analyses
 - D) unpopular decisions
 - E) social reification
11. Because leading is one of the four basic managerial functions in organizations, _____ leaders.
 - A) all managers are
 - B) some managers are
 - C) all managers are not
 - D) managers should be
 - E) some managers should be
12. Which of the following factors has contributed most to the current view that management is more unethical today than before?
 - A) increasing publicity
 - B) increasing government standards
 - C) decreasing employee morale
 - D) decentralizing organizational structure
 - E) changes in shareholder expectations
13. Organization development can be viewed as an attempt to change an organization's _____.
 - A) structure
 - B) financial goals
 - C) culture
 - D) market share
 - E) reputation

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：管理學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】 題號：441004

※本科目依簡章規定「不可以」使用計算機(混合題)

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14. Which is the primary reason for why managers often travel long distances to have a face-to-face meeting with someone?
- A) It shows respect and politeness.
 - B) It is a company's ritual.
 - C) Other forms of communication have security concerns.
 - D) It communicates a sense of power, rank, and mobility.
 - E) Most communication is done through body language.
15. _____ management oversees the transformation process that converts resources such as labor and raw materials into finished goods and services.
- A) Control
 - B) Operations
 - C) Technology
 - D) Planning
 - E) Systems
16. Which of the following contributed most to many companies becoming highly leveraged in the lead-up to the economic downturn in 2008?
- A) low financial returns
 - B) high interest rates
 - C) low interest rates
 - D) limited liquidity
 - E) no liquidity
17. Which of the following is the best example of a company being socially responsive?
- A) meeting hazardous materials standards
 - B) giving Christmas bonuses to worthy employees
 - C) displaying "think green" posters
 - D) building a community day-care center
 - E) offering coupons to loyal customers
18. A retail clothing store manager who estimates how much to order for the current spring season based on last spring's outcomes is operating under what kind of decision-making condition?
- A) seasonal
 - B) risk
 - C) uncertainty
 - D) certainty
 - E) factual
19. Planning gives organizations direction that primarily helps them _____.
- A) improve financial performance
 - B) improve their image in the business community
 - C) improve morale of middle managers
 - D) improve morale of all employees
 - E) improve teamwork and coordinate activities
20. All of the following are characteristics of a highly formalized organization EXCEPT _____.
- A) explicit job descriptions
 - B) little discretion for employees
 - C) minimum number of rules
 - D) a standardized way of doing things
 - E) centralized decision-making processes

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：管理學【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】 題號：441004

※本科目依簡章規定「不可以」使用計算機(混合題)

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二、簡答題，不倒扣，合計 25 分

請以中文扼要但精準地回答下列問題：

1. Please briefly explain the five-stage group development model. (10%)
2. Please briefly discuss the Job Characteristics Model. (10%)
3. 自2017年1月1日開始，《勞動基準法》的“一例一休”新制正式施行。請扼要說明：(1) 何謂“一例一休”制度？(3%) (2) 這個新制度與舊制度的主要不同點在哪裡？(2%)

三、個案分析題，不倒扣，合計 25 分

請在讀完以下個案後，以中文回答下列問題：

1. Please clearly (a) explain the differences among ethnocentric, polycentric, and geocentric orientations in cross-cultural settings (9%); (b) identify which cultural orientation was adopted by the American hosts (1%) and (c) provide evidence illustrated in the case to support your answer (3%).
2. Why were the American hosts surprised by the behavior of the Taiwanese? (3%) How do you think the Americans expected the Taiwanese to behave? (3%)
3. Why do you think the Taiwanese behaved the way they did? (6%)

Case title: Pull Out All the Stops

A U.S. packaging company wished to extend its activities in the area of convenience foods. It has pinpointed one particular area where it could supply pizza boxes to half a dozen chains of pizza restaurants which operated home delivery services. These chains relied on local suppliers for their pizza boxes and were unhappy with the products supplied, the irregular delivery and, above all, the cost.

Through intensive online research and consultation with the commercial section of the embassy of the Republic of China (Taiwan), the Americans had managed to find a packaging manufacturer near Kaohsiung that could provide pizza boxes at a very reasonable price in line with the specifications and quantities required and deliver them within the deadlines set.

Negotiations by email and phone had taken place and a deal seemed imminent. Before contracts could be signed, however, it was agreed that both the Taiwanese and American partners should visit each other's headquarters and meet face-to-face to establish complete confidence in their cooperation and to settle final details. The Taiwanese were to visit U.S. and the Americans were fly to Taiwan two weeks later.

The American company decided to pull out all the stops to give their visitors a reception they would never forget. They arranged an elaborate welcome ceremony in a five-star hotel, to be followed by an authentic Taiwanese dinner. Considerable attention was paid to all the details involved, some of the ingredients for the meal had even been specially imported from Taiwan for the occasion.

Eventually the big day came and the Taiwanese guests were whisked by limousine to the hotel where they were greeted by the American company's president and management team. Despite the lavish words of praise from the Americans in front of the hundred guests presented, and the bonhomie everyone tried to engender, the Taiwanese remained reserved and very formal in their behavior.

During the meal the Taiwanese did not seem to appreciate the effort put into the food they were served. Moreover, they said very little and the attempts by the Americans to keep the social conversation going eventually ended in silence on both sides. Despite being promised an exotic Taiwanese floor-show after the dinner, the delegation made their excuses (they were tired after their journey) and quietly retired to their rooms. The Americans were surprised and disappointed. What had gone wrong?

國立中山大學 106 學年度碩士暨碩士專班招生考試試題

科目名稱：微積分【企管系企管甲班碩士班甲組選考、乙組選考、丙組選考】

題號：441003

※本科目依簡章規定「不可以」使用計算機(問答申論題)

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請按題號順序作答，並請寫出推導過程，違者扣分。

1. Find the derivative $\frac{dy}{dx}$ of the following. (15%)

i. $\sqrt{X} + \sqrt{Y} = 10$ ii. $y = \frac{3}{x-1} - \frac{5}{x+1}$ iii. $y = t^5, t = \frac{1}{3x-1}$

2. Evaluate the following. (25%)

i. $\int_{-\infty}^0 \frac{dx}{\sqrt{1-x}}$ ii. $\int \frac{x^2}{x+5} dx$ iii. $\int xe^{3x} dx$ iv. $\lim_{x \rightarrow 0} \frac{1-e^x}{x^2}$ v. $\int_0^3 \frac{x}{25-x} dx$

3. Sketch the following, indicate roots, local extrema, inflection point, concave structure, and asymptotic lines (if applicable). (20%)

i. $f(x) = \frac{5}{x-5}$ ii. $f(t) = 8t^5 - 5t^4 - 20t^3$

4. Find the average value of $f(x) = 7x^4$ over $[0, 2]$ (10%)

5. Find $g'(x)$ given $g(x) = \int_0^{x^2} t^3 \cos t dt$. (10%).

6. Find the Taylor polynomial of the 5th degree of $f(x) = e^{-x}$ and the remainder term $R_5(x)$. (10%)

7. 小明現在每月收入是 35000 元，勉強維持小確幸的生活。請問小明十年後每月必須有多少收入以便維持現在的生活。如果通貨膨脹率在這段期間是 2% 又假設通貨膨脹率以連續複利來算的話。(10%)