

龍華科技大學  
九十一學年度商學與管理研究所  
「管理學」科目試題卷

SHORT ANSWER

1. Define the planning function's importance to organizational success? (5%)
2. What is Maslow's theory of motivation and how are management use this theory in a business setting? (5%)
3. What are the reasons for studying management? (5%)
4. Compare and contrast individual and group decision making. (5%)

ESSAY QUESTIONS

5. Explain your view of the role of corporations in society today. Expand upon your thinking about the role corporations have in social responsibility in light of their role in society. (20%)
6. Explain how to apply the process of decision making to your decisions about your future career. (20%)
7. What is leadership and why is it important to management? (20%)
8. Describe communication in organization and identify the major reasons why communications break down. (20%)

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「管理資訊系統」科目試題卷

1. 說明 KDD (Knowledge Discovery in Database), OLAP (Online Analytical Process) 與 Data Mining 之關係?(30%)
2. 說明行動商務 (Mobile Commerce) 與電子商務 (E-Commerce) 之異同?(40%)
3. 說明 IT (Information Technology) 倫理 PAPA (Privacy、Accuracy、Property、Accessibility)之內容?(30%)

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「經濟學」科目試題卷

- 請利用圖形說明對獨占廠商課徵何種稅收，將不會影響廠商的產量但會減少其利潤。
- 如果現在有兩家百貨公司，S百貨公司及K百貨公司，其折扣戰與不打折扣戰之利潤如下表。請問兩家百貨公司如果無法勾結的話，什麼策略是其最佳策略？若可以勾結的話，百貨公司會採行什麼策略？

|       |       |              |              |
|-------|-------|--------------|--------------|
|       |       | K百貨公司        |              |
|       |       | 打折扣戰         | 不打折扣戰        |
| S百貨公司 | 打折扣戰  | (2千萬, 2千萬)   | (5千萬, 0.5千萬) |
|       | 不打折扣戰 | (0.5千萬, 5千萬) | (3千萬, 3千萬)   |

- 何謂逆選擇(adverse selection)? 何謂道德風險(moral hazard)? 試以政府的健康保險為例，說明在資訊不對稱的保險市場中，政府如何解決逆選擇及道德風險的問題。
- 台灣近年來景氣低迷，利率不斷下降，大約維持在較低的 2% 左右，政府採取了多種振興方案都難以發生作用，請以「流動性陷阱」來討論目前台灣總體經濟情況。
- 請討論稱為「塑膠貨幣」的信用卡使用額度為何不納入貨幣數量的統計？我國信用卡的簽帳使用率越來越高，這會如何影響到民眾對貨幣的需求？

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「生產管理」科目試題卷

計算題問答題共八題：第一到第七題每題十二分，最後一題十六分。

第一題、Boe and Ann Warren bake pies for resale to local supermarket. They and their three employees invest 50 hours per day making 150 pies.

- (a) What is their productivity?  
(b) They have discussed reassigning work so the flow through the bakery is smoother. If they are correct and they can do the necessary training, they think they can increase apple pie production to 155 per day. What is their new productivity?  
(c) What is their increase in productivity?

第二題、有六個工作將分兩個階段被處理，這兩個階段所需的時間如下表所示：

| 工作 | 操作一 | 操作二 |
|----|-----|-----|
| A  | 10  | 5   |
| B  | 7   | 4   |
| C  | 5   | 7   |
| D  | 3   | 8   |
| E  | 2   | 6   |
| F  | 4   | 3   |

請決定這些工作的先後處理順序，使得完成所有工作的總時間為最短，並以圖示之。

第三題、Kanet's Home Center Allows back-ordering on most of its major appliances, including dishwashers. The annual demand for one type of dishwasher is 100. Its costs approximately \$10 to place an order, and the annual carrying cost is \$4 per year per unit. Back-ordering cost is approximately \$5. What is the optimal order quantity and what is the optimal number of remaining units after the back order has been satisfied?

第四題、有四個生產點被考量用來生產划雪的設備廠，設廠的固定和變動成本如下表所示：

|      | 固定成本   | 變動成本 |
|------|--------|------|
| 亞特蘭大 | 125000 | 6    |
| 柏林頓  | 75000  | 5    |
| 克利芬蘭 | 100000 | 4    |
| 丹佛   | 50000  | 12   |

- (a) 請為這四個可能的生產地點繪出四條成本線  
 (b) 請決定在那一個生產量的範圍時，該在那一個地點來生產？  
 (c) 如果預定的生產量為 5000 個單位，那麼該選在那一個點來生產？

第五題、Calculate the critical path, completion time T, and variance V based on the following information.



| Activity | t | v   | ES | EF | LS | LF | S |
|----------|---|-----|----|----|----|----|---|
| 1-2      | 2 | 2.6 | 0  | 2  | 0  | 2  | 0 |
| 1-3      | 3 | 2.6 | 0  | 3  | 1  | 4  | 1 |
| 2-4      | 2 | 4.6 | 2  | 4  | 2  | 4  | 0 |
| 3-5      | 4 | 4.6 | 3  | 7  | 4  | 8  | 1 |
| 4-5      | 4 | 2.6 | 4  | 8  | 4  | 8  | 0 |
| 4-6      | 3 | 1.6 | 4  | 7  | 10 | 13 | 6 |
| 5-6      | 5 | 1.6 | 8  | 13 | 8  | 13 | 0 |

第六題、說明看板管理系統是什麼？優缺點、並說明其傳遞方法。

第七題、擬定策略規劃時應該考量到很多的構面，請任意說明其中的五項。

第八題、說明 MRP 系統的基本內容，並以一個例子來解釋。

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「統計學」科目試題卷

統計學試題 (常態分配機率值，請參考本卷附表)

1. 若  $X$  呈 Poisson 分配，其 p.d.f. 為  $\frac{\lambda^x e^{-\lambda}}{x!}$ ， $x=0, 1, 2, \dots$ 
  - (1). 試求其動差母函數；(7%)
  - (2) 並應用此動差母函數，求其期望值  $E(X)$  和變異數  $\text{Var}(X)$ 。(8%)
  
2. 依據國外實際經驗，於雨天或黃昏等光線較不明亮時段，若強制車輛開大燈，可顯著降低事故之發生，所以我國政府目前也正準備立法，於規定的時間、路段強制汽車開亮大燈。因此，想要先了解一般駕駛人在光線不佳時，會自動開大燈的比例  $p$ ，今在冬季下午 4:00~5:00 於各路口隨機觀察 400 輛過往汽車，其中僅有 50 輛有開大燈，
  - (1) 試求  $p$  的 95% 的信賴區間；(6%)
  - (2) 請解釋(1)中信賴係數 95% 的意義；(4%)
  - (3) 若希望(1)中的信賴區間寬度不要超過 0.05，則上述的樣本數是否足夠？應如何調整？(5%)
  
3. 龍華便利商店想要了解商品陳列位置與銷售額的關係，乃在其共 30 家分店中進行實驗，先將甲食品放在 A 處一週，記錄其銷售量，再改放在 B 處一週，並記錄其銷售量，結果如下表，請問陳列位置不同，是否使銷售量不同？( $\alpha=0.05$ ) (15%)

| 商店別        | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
|------------|----|----|----|----|----|----|----|----|----|----|
| 銷售量<br>(A) | 52 | 39 | 42 | 77 | 26 | 21 | 10 | 10 | 17 | 30 |
| 銷售量<br>(B) | 72 | 20 | 67 | 62 | 38 | 15 | 14 | 15 | 14 | 48 |

|            |    |    |    |    |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|----|----|----|----|
| 商店別        | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 銷售量<br>(A) | 23 | 30 | 15 | 56 | 12 | 9  | 33 | 23 | 49 | 31 |
| 銷售量<br>(B) | 22 | 30 | 8  | 85 | 20 | 27 | 46 | 32 | 60 | 21 |

|            |    |    |    |    |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|----|----|----|----|
| 商店別        | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 銷售量<br>(A) | 16 | 40 | 14 | 14 | 41 | 35 | 24 | 24 | 18 | 10 |
| 銷售量<br>(B) | 33 | 80 | 14 | 28 | 20 | 11 | 18 | 50 | 49 | 8  |

4. Given 5 pairs of points (X, Y) shown below, what line of the form  $Y=b + aX$  best fit the data by method of least squares. (15%)

X 7 10 12 15 18

Y 2 3 4 5 6.3

5. Three fair cubical dice are thrown. Find the probability that:
- (1) the sum of the score is 18; (3%)
  - (2) the sum of the score is 5; (4%)
  - (3) none of the three dice shows a 6; (4%)
  - (4) the product of the scores is 90. (4%)
6. Suppose that the number of days taken by a letter to travel through the mail is given by one of the following distributions, depending on whether the letter is sent by first or second class mail:

| Days taken                        | 1   | 2   | 3   |
|-----------------------------------|-----|-----|-----|
| Probability for first class mail  | 0.9 | 0.1 | 0   |
| Probability for second class mail | 0.2 | 0.5 | 0.3 |

Now a letter is sent by first class mail. The reply will be sent on the same day as the letter is received, and is sent by second class mail. On the assumption that the times taken by the two letters are independent.

(1) construct the joint distribution of  $X$ ,  $Y$ , the times in days taken by the letter and the reply respectively; (7%)

(2) derive the distribution of the total time taken by the letter and the reply. (8%)

7. Compare and explain with examples for the meaning and differences of Simple Random Sampling and Systematic Sampling. (10%)

