

# 國立高雄師範大學九十七學年度碩士班招生考試試題

系所別：科技管理研究所

科 目：管理學（共 3 頁，第 1 頁）

一、名詞解釋：(30%)

1. MBO (Management by objective) & MBO (Management buy-out) (6%)
2. Transformational leadership & Transactional leadership (6%)
3. BSC (balanced score card) (6%)
4. Knowledge management & Technology management (6%)
5. TNC (transnational corporation) & MNC (multinational corporation) (6%)

二、申論題：

請說明改善 (improvement)、變革 (change)、創新 (innovation) 的意義及組織在運用或推動此三者時所應考量的利弊得失。(20%)

三、如何藉由期望理論 (expectancy theory of motivation)、工作特性模式 (Job Characteristics Model) 與社會技術系統 (sociotechnical system) 的觀念，有效激勵高科技產業的知識型工作者。(20%)

四、Multiple Choice (Identify the best answer in each question) (30%, 2% for each)

**此部分請於答案卷上，以每行(橫向為行)填答五題方式作答，並請清楚標明題號。**

1. Which of the following would be least likely to enhance acceptance of a manager's commands?  
(A) the manager possesses adequate communication skills  
(B) use of the complete chain of command to issue orders  
(C) a direct line of communication between manager and subordinate  
(D) possession of adequate communication channels  
(E) use of informal communication channels
2. When every organization member understands his or her own job and how the jobs fit together to provide final products to the customer, Senge would characterize that as:  
(A) systems thinking  
(B) team learning  
(C) shared vision  
(D) social responsibility  
(E) personal mastery
3. Which of the following is most accurate when describing the management thinking that emerged as a result of the Hawthorne studies?  
(A) social relationships are unimportant in worker performance  
(B) the emphasis should be placed on task efficiency in job design  
(C) job design should involve the bonus system  
(D) managerial problems should be solved through the utilization of management science techniques  
(E) the human variable in organizations required much more analysis

(背面有題)

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4. Because Jamie is the manager, her subordinates do what she says. This is an example of:
  - (A) social power
  - (B) authority
  - (C) personal power
  - (D) total power
  - (E) position power
  
5. In managing information systems, an organization can improve IS effectiveness by managing:
  - (A) user satisfaction, IS workforce satisfaction, and customer satisfaction
  - (B) the IS workforce, line managers, and staff managers
  - (C) security, speed, and accuracy
  - (D) technology, personnel, and money
  - (E) user satisfaction, security, and the IS workforce
  
6. The correct order of the steps in the innovation process is:
  - (A) inventing, integrating, developing, diffusing, monitoring
  - (B) developing, inventing, diffusing, integrating, monitoring
  - (C) inventing, developing, diffusing, integrating, monitoring
  - (D) developing, diffusing, integrating, inventing, monitoring
  - (E) inventing, diffusing, developing, integrating, monitoring
  
7. The environmental level that contains components normally having a relatively specific and immediate impact on managing the organization is the:
  - (A) task environment
  - (B) operating environment
  - (C) general environment
  - (D) internal environment
  - (E) none of the above
  
8. Our manager always believed an organization only requires an income statement once a year. We have a very tight profit margin in our business (only 3 cents on the dollar, if we are running efficiently). By only requiring an income statement showing income and expenses annually, the manager is ignoring which fundamental of successful controlling?
  - (A) the control process is appropriate to the control activity
  - (B) the control process must be timely
  - (C) the control process must be focused on the appropriate organizational goal
  - (D) the control process must be communicated to appropriate people
  - (E) none of the above
  
9. Managerial skills that involve using specialized knowledge and expertise are termed:
  - (A) technical skills
  - (B) conceptual skills
  - (C) human skills
  - (D) planning skills
  - (E) analytical skills

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10. The main challenges of using the contingency approach are all of the following EXCEPT:
- (A) competently implementing the appropriate tactic
  - (B) choosing the management tactics best suited to the situation
  - (C) choosing the appropriate management science technique
  - (D) perceiving organizational situations as they actually exist
  - (E) applying scientific management effectively
11. A "secret shopper" that comes into a restaurant and observes the quality of service and food she receives is an example of:
- (A) precontrol
  - (B) postcontrol
  - (C) concurrent control
  - (D) customer control
  - (E) feedback control
12. The process of assigning job activities and related authority to specific individuals in the organization is termed:
- (A) decentralization
  - (B) delegation
  - (C) responsibility
  - (D) accountability
  - (E) authority
13. Nick is 29 years old and has just been promoted from salesperson to sales manager for his company. Nick is most likely in which stage of his career?
- (A) exploration
  - (B) decline
  - (C) maintenance
  - (D) stagnation
  - (E) establishment
14. The process of applying a new idea to the improvement of organizational processes, products, or services is called:
- (A) continuous improvement
  - (B) innovation
  - (C) TQM
  - (D) competition
  - (E) creativity
15. The right to perform or command is:
- (A) accountability
  - (B) authority
  - (C) responsibility
  - (D) delegation
  - (E) centralization

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科 目：科技管理（含個案分析）（全一頁）

一、請就下列六類產業中，挑選您所熟悉的一類，並採用適當的管理相關理論、模式或學說（如 Transaction Cost Theory）至少一種，評析台灣未來五年間該產業的國際競爭優、劣勢如何。（25%）

- (1) 兩兆雙星產業(可任選其中一類)
- (2) 生物科技產業
- (3) 港灣相關之運籌服務產業(如倉儲、運輸)
- (4) 玩具產業
- (5) 文化創意產業
- (6) 運動用品產業

※請由以上六類產業自選一類回答即可。

二、台灣製造產業過去二十年間，高度依靠製造策略中的「彈性」(flexibility)創造競爭優勢。請回答下列二個子題：（25%）

- (1) 台灣過往如何營造製造上的彈性？
- (2) 在 21 世紀的今天，台灣產業可利用哪些創新的方法，創造或持續其彈性。

三、 Define the management of technology and give an example based on your knowledge. (10%)  
（以英文或中文作答皆可）

四、 (1) Describe technology progresses through a three-stage technology life cycle. (10%)  
(2) Explain subtechnology life cycles in multiple generations of innovation shape the overall technology life cycle. (10%)  
（以英文或中文作答皆可）

五、 Why are strategy and the management of technology and innovation so interconnected? (20%)  
（以英文或中文作答皆可）

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科目：微積分（全一頁）

1.  $h(x) = \begin{cases} 4-x^2 & \text{假如 } x < 1 \\ 2+x^2 & \text{假如 } 1 < x \end{cases}$ ，求  $\lim_{x \rightarrow 1^-} h(x)$  之值。(8%)

2. 求圖形  $y = x^2 - x + 2$  上，以點  $(2, 5)$  為切點的切線方程式。(8%)

3.  $y = \sin(nx) \sin^n(x)$ ，求  $\frac{dy}{dx}$  並利用三角的和角公式將答案化簡為關於  $\sin(n+1)x$  的形式。(8%)

4.  $\int \sin(\ln x) dx = ?$  (8%)

5. 求  $x = y^2$  與  $y = x - 2$  兩曲線所圍的面積。(8%)

6.  $f(x, y) = \begin{cases} \frac{x-y}{(x+y)^3} & \text{假如 } (x, y) \neq (0, 0) \\ 0 & \text{假如 } (x, y) = (0, 0) \end{cases}$ ，求  $\int_0^1 \int_0^1 f(x, y) dy dx$  和  $\int_0^1 \int_0^1 f(x, y) dx dy$  (10%)

7. 求  $\lim_{x \rightarrow 1} \frac{x^2 - 5x + 4}{x^2 - 3x + 2}$ 。(5%)

8. 求  $\lim_{x \rightarrow 1} (x^3 - 2x^2 - x + 5 + \frac{x^2 - 4}{x - 2} + \frac{x^2 - 5x + 4}{x^2 - 3x + 2})$ 。(5%)

9. 求  $y = x^2 + x$  外的點  $P(2, 5)$  的切線方程式。(5%)

10. 求  $(x^2 + 1)(3x + 4)(2x + 1)$  的導函數。(5%)

11. 求  $f(x) = \frac{5x^2 + 8x + 5}{x^2 + 1}$  的極值可能出現在哪些點？(5%)

12. 求  $\int_0^{\frac{\pi}{2}} \sin x \cos 3x dx$  的值。(5%)

13. 求  $\int_1^e \frac{\ln x^4}{x} dx$ 。(5%)

14. 求  $\int_0^1 \frac{x}{x^2 + 1} dx$ 。(5%)

15. 求  $f(x) = x^3 - 3x^2 + 2x$  與  $g(x) = -x^3 + 4x^2 - 3x$  的圖形所圍成的區域面積。(10%)

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科 目：經濟學（全一頁）

- 一、假設政府為照顧低收入戶而對租屋市場採行「房租上限管制」措施，請分析此管制政策之利弊及對租屋需求者與供給者福利的影響。又，假設政府為保護本國勞工的就業機會，故對於外國勞工之薪資採行「最低基本薪資」的價格下限措施，請分析此管制政策之利弊及對勞動供給者與勞動需求者的影響。（20%）
  
- 二、請解釋為何有些公司雖然營運後會計利潤為正，卻仍然選擇歇業？並探討公司決定歇業與否所需考量之因素有哪些？（10%）
  
- 三、請以凱因斯模型之角度評論資治通鑑所述之「國無九年之儲，家無三年之蓄，家非其家，國非其國，故知立國立家皆資於儲蓄矣。」（10%）
  
- 四、近來不少民營電信業者針對撥打國際電話時段不同，訂定不同的收費方式，例如在夜間及例假日收取較低的費用，而在一般時段收取較高的通信費用，請問這是否會影響電信業者之利潤？業者宣稱，此乃「嘉惠老顧客之回饋促銷活動」，請評論之。（10%）
  
- 五、請以經濟學的觀點，分析為什麼經濟全球化是必然的發展趨勢？並請以台灣近半世紀（50年）以來的經濟發展策略為例，簡析台灣經濟全球化的歷程。（25%）
  
- 六、解釋以下名詞（每題5分，25%）
  1. 規模經濟
  2. 塞伊法則
  3. 範圍經濟
  4. 邊際效用遞減法則
  5. 熊彼得