Instructions: (Before you start, read all the instructions carefully.)

a. 答案必須沿著答案卷的橫格線從左到右書寫。所有選擇題答案須寫在答案卷的第一頁，違者扣五分。

b. 本試題共分三部分，分別是選擇題(30%)，簡答題(35%)，和個案(35%)。

Part I. Multiple Choice Questions (Choose the BEST one that answers the question) @3%

1. Which one of the following turns into an acute challenge confronting managers after our country joined WTO?
   - a. the information systems investment challenge.
   - b. the strategic business challenge.
   - c. the globalization challenge.
   - d. the information architecture and infrastructure challenge.
   - e. the responsibility and control challenge.

2. Which emerging technology has the potential to replace bar codes in the near future?
   - a. bluetooth.
   - b. DIAD.
   - c. RFID.
   - d. LED.
   - e. none of the above.

3. The Internet is capable of increasing _____ for most organizations.
   - a. richness and reach
   - b. agency costs
   - c. transaction costs
   - d. both b and c
   - e. all of the above.

4. Ensuring the right items, right quantities, and right timing concerning the production and delivery of the desired product or services is the objective of:
   - a. ERP
   - b. SCM
   - c. CRM
   - d. KM
   - e. none of the above.

5. Which one of the following organizational changes carries the greatest risk?
   - a. Reengineering
   - b. Paradigm shift
   - c. Automation
   - d. Rationalization of procedures
   - e. none of the above.

6. An organization where nearly all significant business processes and relationships with customers, suppliers, and employees are digitally enabled and key corporate assets are managed through digital means best defines:
   - a. formal system.
   - b. enterprise system.
   - c. knowledge-based firm.
   - d. digital firm.
   - e. none of the above.

7. Investments in organization and management, such as new business processes, management behavior, organizational culture, or training best describes:
   - a. organizational and management capital.
   - b. business processes.
   - c. intellectual capital.
   - d. return on investment.
   - e. none of the above.

8. The return of items from buyers to sellers in a supply chain best describes:
   - a. reverse logistics.
   - b. return logistics.
   - c. retro logistics.
   - d. downstream logistics.
   - e. none of the above.

9. The use of digital technologies to enable multiple organizations to collaboratively design, develop, build, and manage products through their lifecycles best describes:
   - a. value chain.
   - b. collaborative commerce.
   - c. enterprise system.
   - d. extranet.
   - e. none of the above.

10. Because it makes it easier for managers to oversee a greater number of employees, information technology can reduce:
    - a. transaction costs.
    - b. agency costs.
    - c. communication costs.
    - d. coordination costs.
    - e. none of the above.

Part II. Short-Answer Questions (35%)

1. What are the five moral dimensions raised by information systems?

注意：背面有試題

2. What are the four capabilities of operating system? Among them which one is the one that can share a computer's resources at any one time through concurrent use of the CPU?

3. List five major problems in the traditional file processing environment.

4. What are the three basic LAN network topologies? Among them which one is the easiest one to be extended? And among them which one is the one that all signals are broadcast in both directions to the entire network?

5. Give five common problems when enterprise trying to rebuild their information architectures and infrastructures for supporting enterprise-wide business processes.

6. What are the three types of M-Commerce services and applications for mobile computing? And what are the two main standards for the accessing the web from wireless mobile devices?

7. What are the three types of contemporary DBMS? Among them which one is the one that information in more than one file can be easily extracted and combined? And among them which one are considered outdated?

Part III. Case Study (35%)

Sears, Roebuck and Co. used to be the largest retailer in the United States. During the 1980s, Sears moved into other businesses, hoping to provide middle-class consumers with almost every type of banking, investment, and real estate service in addition to selling appliances, hardware, clothes, and other goods.

This diversification tore Sears away from its core business, retail sales. Sears has steadily lost ground in retailing, moving from the Number 1 position to Number 3 behind discounters Wal-Mart Stores, Inc. and Kmart Corporation. Sears could not keep up with the discounters and with specialty retailers such as Toys R Us, Home Depot, Inc., and Circuit City Stores, Inc. that focus on a wide selection of low-price merchandise in a single category. Nor could Sears compete with trend-setting department stores. Yet Sears has been heavily computerized. At one time it spent more on information technology and networking than other non-computer firms in the United States except the Boeing Corporation. It was noted its extensive customer databases of 60 million past and present Sears credit card holders, which it used to target groups such as appliance buyers, tool buyers, gardening enthusiasts, and mothers-to-be with special promotions.

Why hasn't this translated into competitive advantage? One big problem is Sears' high cost of operations. Nearly 30 percent of each dollar in sales is required to cover overhead (e.g., expenses for salaries, light bills, and advertising) compared to 15 percent for Wal-Mart and about 21 per cent for Kmart. Sears stopped trying to sell everything and started focusing on seven core types of merchandise--men's, women's and children's clothing, home furnishings, home improvement, automotive services and supplies, appliances, and consumer electronics. The company is rearranging its merchandise displays to resemble those of more upscale department stores, with more attention to women's apparel, which is considered a highly profitable segment of merchandising. Sears is also offering special merchandise in each store geared to its local customer base. And it is relieving managers and clerks of some reporting and administrative tasks so they have more time to actually sell. Beginning in 1996 every employee's compensation included a measurement for customer service. Sears realized that it could not compete with discounters such as Wal-Mart Corporation on price alone and focused on building a competitive edge through superior service.

New Point-of-Sale (POS) terminals allow sales staff to issue new charge cards, accept charge card payments, issue gift certificates, and report account information to card holders. The POS devices provide information such as the status of orders and availability of products, allowing associates to order out-of-stock goods directly from the sales floor. Some stores have installed ATM machines to give customers cash advances against their Sears Discover credit cards. Telephone kiosks have been installed throughout the Sears retail network. Customers can use them to inquire about service, parts, and credit, check the status of their car in the tire and auto center, or call the manager.

Sears has been moving its suppliers to an electronic ordering system. By linking its computerized ordering system directly to that of each supplier, Sears plans to eliminate paper throughout the order process and hopes to expedite the flow of goods into its stores. Until a few years ago, Sears merchandise buyers lacked reliable information on precisely what customers were buying at each store. They could not view anything more specific than each division's daily performance. Management relied on 18 separate systems that often contained conflicting and redundant pricing information. Today, any authorized Sears employee can use SPRS to look up any sales figure by store, by area, by item, right down to the size and color of a sweater. Sales can be analyzed by item or product category, by individual store or company wide. Sales of items advertised in newspapers for a specific day can be tallied so that Sears' 1000 buyers and managers can know what hot-selling merchandise to replenish right away. Buyers can compare current performance of merchandise with that of the previous week or the previous year. The data can be displayed in a number of different ways, including pie charts or graphs.

Sears is using Internet technology to develop a system that will let suppliers check the status of their invoices. Sears wants to give vendors access to SPRS so that they can check the sales of their products and provide just-in-time inventory service. It is also working with Sun Microsystems and other technology companies to create home appliances and services that use the Internet.

1. Evaluate Sears' new business strategy. What management, organization, and technology issues are addressed by this strategy? (20%)

2. To what extent have information systems provided competitive advantage for Sears? Explain. (15%)