台灣聯合大學系統94學年度學士班轉學生考試命題紙

科目：資訊管理導論　類組別：B4　共 5 頁第 1 頁　*請在答案卷內作答

Part I. Multiple Choice (30%，單選題@2%，答案請用大寫英文字母直接寫在答案卷上)

1. Antivirus software is usually effective only against:
   A. worm viruses.　B. viruses spread on the Internet.
   C. macro viruses.　D. viruses known when the software is written.
   E. script viruses.

2. The most expensive phase of the systems development process is:
   A. maintenance.　B. design.
   C. documentation.　D. the cost of personnel to run it.
   E. testing.

3. In a sociotechnical perspective on information systems, the performance of a system is optimized when:
   A. the organization operates more efficiently and effectively.
   B. both the technology and the organization mutually adjust to one another until a satisfactory fit is obtained.
   C. everyone in the organization understands his/her place in the system.
   D. the introduction of updated equipment does not temporarily disable the function of the organization.
   E. all of the above.

4. The capability of Quanta Computer (廣達電腦) to fulfill its Web orders, account for 60% of its millions NB shipments is called:
   A. economy of scale.　B. mass production.
   C. mass customization.　D. mass communication.
   E. none of the above.

5. The particular design that information technology takes in a specific organization to achieve selected goals or functions best defines:
   A. information architecture.　B. information infrastructure.
   C. digital architecture.　D. information system.
   E. digital blueprint.

6. _____ are typically a major source of data for other systems.
   A. transaction processing systems.　B. management information systems.
   C. decision-support systems.　D. executive support systems.
   E. none of the above.

7. By making it worthwhile for firms to contract with external suppliers instead of internal sources, information technology can reduce:
   A. transaction costs.　B. outsourcing costs.
   C. agency costs.　D. collaboration costs.
   E. none of the above.

8. The competitive forces model is used primarily for analyzing strategy at the _____ level.
   A. business　B. firm
   C. industry　D. individual
   E. none of the above.

9. Which of the following refers to large disparities in access to computers and the Internet among different social groups and different locations?
   A. Computer divide　B. Technology divide
   C. Digital divide　D. Information divide
   E. Social divide

10. When a cookie is created during a Web site visit, it is stored:
A. on the Web site computer.　B. on the visitor's computer.
C. on the ISP's computer.　D. in a Web directory.
E. at the node.

11. _____ uses tiny tags with embedded microchips containing data about an item and its location to transmit short-distance radio signals to special readers that then pass the data on to a computer for processing.
A. RAID　B. RFID
C. Bar code　D. IC card
E. none of the above.

12. Database designers document the conceptual data model with:
A. normalization diagrams.　B. an entity-relationship diagram.
C. a distributed-hierarchical diagram.　D. an entity-attributes diagram.
E. none of the above.

13. Which of the following is the Wi-Fi mode where wireless devices communicate with a wired LAN via access points?
A. Peer mode　B. Ad-hoc mode
C. Multiplexed mode　D. Infrastructure mode
E. none of the above.

14. Facilities for managing the delivery of voice information using the Internet Protocol best defines:
A. WAP.　B. Wi-Fi.
C. VoIP.　D. XML.
E. none of the above.

15. The most successful solutions or problem-solving methods for consistently and effectively achieving a business objective best describes:
A. business module.　B. formal system.
C. business process.　D. best practices.
E. none of the above.

Part II. Fill In the Blanks (20%, 填充題@2%)

1. _____ views the firm as a nexus of contracts among self-interested individuals who must be supervised and managed.

2. _____ is the situation where the relative bargaining power of two parties in a transaction is determined by one party in the transaction possessing more information essential to the transaction than the other party.

3. _____ are programming languages very close to human language.

4. _____ is the analysis of large pools of data to find patterns and rules that can be used to guide decision-making and predict future behavior.

5. A(n) _____ is a set of rules and procedures that govern transmission between the components in a network.

6. The set of processes developed in an organization to create, gather, store, maintain, and disseminate the firm's knowledge is called _____

7. A(n) _____ is a computer system at the management level of an organization that combines data, analytical tools, and models to support semistructured and unstructured decision-making.

8. _____ refers to a traditional methodology for developing an information system that sets the process up into formal stages that must be completed sequentially.

9. A(n) _____ is the type of hardware and the series of on-screen commands and responses required for a user to work with the system.

10. The coding and scrambling of messages to prevent their being read or accessed without authorization is called _____

Part III. Short-Answer Questions (15%, 簡答題@3%)

1. List the three basic categories of electronic commerce as defined by the participants in the transactions.

2. List and describe the three forms of wired transmission used in the telecommunications industry.

3. For the systems development model, listing any three steps to be taken using this model. Describe the activities engaged in at each step you give.

4. Please list any three major types of information system and briefly explain them.

5. Distinguish between RISC and RAID. Which is your new PC most likely to have?

Part IV. Case Study (35%, 個案問答)

Nike, Inc., is the world's number one athletic shoemaker, with 500,000 workers in 55 countries and sales topping 40 percent of the athletic shoe market. The company went through a phenomenal growth spurt from 1996 through 1999, with its annual sales reaching $9 billion in 2000. And yet during 2000 and 2001 the company encountered financial problems and its reputation was seriously damaged.

Many reasons have been suggested for the Nike's recent decline. One, in the minds of many, is Michael Jordan's final retirement as a basketball player (Jordan had been a Nike spokesperson). Analysts also blame poor shoe design and note that New Balance's market share climbed from 7 percent in 1999 to 9 percent in 2000, whereas Nike's share dropped from 43 percent to 40 percent. (New Balance is successfully placing greater emphasis on more subtle designs.) One reason for Nike's problems that everyone, including Nike, agrees on, has been the overproduction of some unpopular shoes and the underproduction of other popular designs. Nike blames both the new supply-chain software it installed and i2 Technologies Inc., the maker of that software, for these production errors.

Dallas, Texas-based, i2 is a major supply-chain software vendor. Nike turned to i2 because it wanted to be able to respond more quickly to shoe market changes by being able to plan production schedules and begin production of a new line of shoes in one week rather than taking a full month after demand shifts. The system is supposed to help predict demand so that the company could better plan and control the production of existing products. Thus, Nike would be able more quickly to reduce the production of shoes that have gone out of style, leaving the company with fewer unwanted shoes, while increasing its production of shoe styles that are rising in demand.

Nike had previously made a major commitment to this type of software by installing an SAP supply-chain management system in the late 1990s. However, the systems were problem ridden and, in Nike's view, inadequate, leading to Nike's second attempt, this time with i2. Nike, like most big corporations, has experience with major information technology projects, the previous one being the installation of an intranet in mid-1997. That project was meant to bring key people in many countries into close contact with the headquarters in order to improve global collaboration and so significantly reduce the time it took to make product design decisions. In that case also, Nike's goal was to respond rapidly to changes in style demands. But many vital employees seldom used the intranet. A later evaluation of the project showed that Nike had planned the project poorly, that key people had been left out, and that the staff was inadequately trained on both the system and its business value.

Not only did Nike recognize that the project would be difficult after its SAP experience, but so did i2. "We knew going in that it was going to be a tough implementation," said Katrina Roche, i2's chief marketing officer, "because the apparel industry tends to be very complex and because Nike had tried other [supply chain tool] vendors and they didn't work out." The $400 million project, part of which was to install the i2 software, began in June 2000.

Nike ran into financial problems when it ordered suppliers to produce too many shoe styles that were declining in popularity, and it did not order enough of the newer models for which the popularity had sharply increased. Orders for some of the less popular shoes were sent to the factories twice—once by the old order-management system and once by the new system—whereas orders for the newer models "fell through the cracks." Foot Locker, the largest Nike shoes retailer in the United States, had to reduce prices on such shoes as Nike's Air Garnett III, which had become a slow-selling shoe and now had to be sold at about $90 instead of about $140. Similarly, the price of Air Terra Human 2 was lowered to $49.99 when it should have been selling at about $100. The company also was late in delivering many of its more popular shoes because of their late production. As a result Nike had to ship them by plane at $4 to $8 a pair compared to 75 cents for shipping by boat, according to Shanley.

At the February 27 informational meeting, Nike said their estimated profit for the quarter would decline from about 50 to 55 cents per share to about 35 to 40 cents. It also announced that the inventory problems would persist for the next six- to nine months while the company sold off the overproduction. It further announced that the problems would cost $80 million to $100 million in sales for that quarter.

As to the future of the project, Knight said, "We believe that we have addressed the issues around this implementation and that over the long term, we will achieve significant financial and organizational benefit from our global supply-chain initiative." A Nike spokeswoman said that Nike is working with i2 to solve the problems and added that i2 had "created some technical and operational workarounds," and the implementation is now stable.

i2 had a very different view on the source of Nike's problems. i2's initial response, on February 27, was that there had been implementation problems, but they "are behind us," according to an i2 spokesperson. He said further that it is a very large and difficult project, but insisted the two companies have a strong partnership." However, the company also answered directly Nike's finger pointing. Greg Brady, the president of i2 Technologies Inc. and a person who had been highly involved with the project, said that he and his company only learned that Nike blamed them when Knight made his public statement that day. "If our deployment was creating a business problem for them, why were we never informed?" Lee Geishecker, a Gartner analyst, commented on Brady's statement saying she does not understand why a company losing so much money because of deployment would not inform the principals. "How can you let the problems not be solved?" Nike never responded to that allegation.

An i2 spokesman said, "Think of all the possible permutations, and it becomes a complex and challenging job to get the system implemented." He claimed that i2 software accounts for only about 10 percent of Nike's $400 million supply-chain project. He pointed out that SAP and Siebel Systems Inc. are also involved with the system, and Nike's stated cost ($400 million) also includes hardware. Brady added, "There is no way that software is responsible for Nike's earnings problem." The company claimed the major problem with the software was Nike's customization. I2 said it did all the required specialized customization work that Nike requested. The customized software then had to be linked with Nike's other back-end systems. However, Roche maintained, "We recommend that customers follow our guidelines for implementation—we have a specific methodology and templates for customers to use—but Nike chose not to use our implementation methodology." She believed Nike saw the i2 methodology as too rigid and so did not use it. Jennifer Tejada, i2's vice president of marketing, also said that i2's software had been too heavily customized.

Tejada raised another issue when she said her company always urges its customers to deploy the system in stages, but Nike went live to thousands of suppliers and distributors simultaneously. Roche claimed this is "an isolated incident." She contended that, "We've got over 1,000 customers up and running, and some of them are in the apparel industry as well. This is the first time any of them have made this kind of announcement." According to Geishecker, Nike went live a little more than a year after launching the project, yet this large a project customarily takes two years, and the system is often deployed in stages. Brent Thrill, an analyst at Credit Suisse First Boston, sent a note to his clients saying that because of the complexities he would not have been surprised if to test the system Nike had run the i2 system for three years while keeping the older system running. Larry Lapide, a research analyst at AMR and a supply-chain expert, jumped in saying, "Whenever you put software in, you don't go big-bang and you don't go into production right away. Usually you get these bugs worked out . . . before it goes live across the whole business." However, Karen Peterson, a research director in the Gartner Group, disagreed, noting that Kmart, which also has major complexities in its forecasting and managing of the supply chain, also reported problems with i2 software. She asserted that, "i2 excels at sales but its execution isn't always flawless. The salespeople make bold promises that their software doesn't always live up to." Roche also said that Nike converted to the new software too early. She claimed Nike started to enter data for its forthcoming spring 2001 line before the cutover to the i2 software was completed. "The solution wasn't stable at the time they started using it."

Please answer the following questions according to the Nike's case study.

1. Classify and describe the problems Nike encountered when it installed the i2 supply chain software. What organizational, management, and technology factors caused these problems? (20 points)
2. Did Nike manage the i2 project well? Who or what do you blame for the failures of the project? Explain your response. (15 points)