



Management Information System - Lecture notes - MIS CH01

Management Information System (Marmara Üniversitesi)

Chapter 1

Information Systems in Global Business Today

True-False Questions

1. Internet advertising is growing at a rate of more than 30 percent a year.
Answer: True **Difficulty: Hard** **Reference: p. 6**
2. A business model describes how a company produces, delivers, and sells a product or service to create wealth.
Answer: True **Difficulty: Easy** **Reference: p. 11**
3. Information technology (IT) consists of all the hardware that a firm needs to use in order to achieve its business objectives, whereas information systems consist of all the software and business processes needed.
Answer: False **Difficulty: Medium** **Reference: pp. 13–14**
4. Computers are only part of an information system.
Answer: True **Difficulty: Easy** **Reference: p. 16**
5. Information systems literacy describes the behavioral approach to information systems, whereas computer literacy describes the technical approach.
Answer: False **Difficulty: Easy** **Reference: p. 16**
6. The dimensions of information systems are management, organizations, and information technology.
Answer: True **Difficulty: Easy** **Reference: p. 16**
7. In order to understand how a specific business firm uses information systems, you need to know something about the hierarchy and culture of the company.
Answer: True **Difficulty: Easy** **Reference: pp. 17–18**
8. Developing a new product, fulfilling an order, or hiring a new employee are examples of business processes.
Answer: True **Difficulty: Easy** **Reference: p. 7**

9. Business processes are logically related tasks for accomplishing tasks that have been formally encoded by an organization.
- Answer: False** **Difficulty: Medium** **Reference: p. 18**
10. A network requires at least two computers and a shared resource, such as a printer.
- Answer: False** **Difficulty: Medium** **Reference: p. 19**
11. . An IT infrastructure provides the platform on which the firm can build its information systems.
- Answer: True** **Difficulty: Easy** **Reference: p. 21**
12. (*Analysis*)
- UPS's use of Web-based tools that allow customers to embed UPS functions such as tracking and cost calculations into their own Web sites was an information systems solution used to achieve customer intimacy.
- Answer: True** **Difficulty: Hard** **Reference: pp. 11, 20–21**
Analysis in terms of categorize
13. A fully digital firm produces only digital goods or services.
- Answer: False** **Difficulty: Easy** **Reference: p. 7**
14. There are four major business functions: Sales and marketing; manufacturing and production; finance and accounting; and information technology.
- Answer: False** **Difficulty: Easy** **Reference: p. 17**
15. In the behavioral approach to information systems, technology is ignored in favor of understanding the psychological, social, and economic impacts of systems.
- Answer: False** **Difficulty: Medium** **Reference: p. 27**
16. Government and private sector standards are examples of complementary social assets required to optimize returns from IT investments.
- Answer: True** **Difficulty: Medium** **Reference: p. 25**
17. Knowledge workers assist with paperwork at all levels of the firm.
- Answer: False** **Difficulty: Easy** **Reference: p. 17**
18. A firm that invests in efficient business processes is making an investment in organizational complementary assets.
- Answer: True** **Difficulty: Medium** **Reference: p. 25**

19. A substantial part of management responsibility is creative work driven by new knowledge and information.

Answer: True

Difficulty: Easy

Reference: p. 19

20. Intranets allow firms to work easily with third-party suppliers and vendors.

Answer: False

Difficulty: Medium

Reference: p. 19

Multiple-Choice Questions

21. The six important business objectives of information technology are new products, services, and business models; customer and supplier intimacy; survival; competitive advantage; operational excellence; and:

- a. improved flexibility.
- b. improved decision making.
- c. improved business practices.
- d. improved efficiency.

Answer: b

Difficulty: Easy

Reference: p. 8

22. Dell Computer's use of information systems to improve efficiency and implement "mass customization" techniques to maintain consistent profitability and an industry lead illustrates which business objective?

- a. Improved flexibility
- b. Improved business practices
- c. Competitive advantage
- d. Survival

Answer: c

Difficulty: Hard

Reference: p. 13

23. The use of information systems because of necessity is:

- a. survival.
- b. improved business practices.
- c. competitive advantage.
- d. improved flexibility.

Answer: a

Difficulty: Medium

Reference: p. 13

24. (Analysis)

Which of the following choices may lead to competitive advantage (1) new products, services, and business models; (2) charging less for superior products; (3) responding to customers in real time?

- a. 1 only
- b. 1 and 2
- c. 2 and 3
- d. 1, 2, and 3

Answer: d

Difficulty: Hard

Reference: pp. 12–13

25. Verizon's implementation of a Web-based digital dashboard to provide managers with real-time information such as customer complaints is an example of:

- a. improved flexibility.
- b. improved decision making.
- c. improved efficiency.
- d. customer and supplier intimacy.

Answer: b

Difficulty: Medium

Reference: p. 12

26. The move of retail banking to use ATMs after Citibank unveiled its first ATMs illustrates the information system business objective of:

- a. improved efficiency.
- b. customer and supplier intimacy.
- c. survival.
- d. competitive advantage.

Answer: c

Difficulty: Medium

Reference: p. 13

27. An information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store, and distribute information to support:

- a. decision making and control in an organization.
- b. communications and data flow.
- c. managers analyzing the organization's raw data.
- d. the creation of new products and services.

Answer: a

Difficulty: Medium

Reference: p. 14

28. The three activities in an information system that produce the information organizations use to control operations are:
- a. information retrieval, research, and analysis.
 - b. input, output, and feedback.
 - c. input, processing, and output.
 - d. data analysis, processing, and feedback.

Answer: c

Difficulty: Easy

Reference: pp. 14–15

29. Order data for baseball tickets and bar code data are examples of:
- a. raw input.
 - b. raw output.
 - c. customer and product data.
 - d. sales information.

Answer: a

Difficulty: Easy

Reference: p. 15

30. (*Analysis*)

The average number of tickets sold daily online is an example of:

- a. input.
- b. raw data.
- c. meaningful information.
- d. output.

Answer: c

Difficulty: Easy

Reference: p. 14

31. Output:

- a. is feedback that has been processed to create meaningful information.
- b. is information that is returned to appropriate members of the organization to help them evaluate the input stage.
- c. transfers data to the people who will use it or to the activities for which it will be used.
- d. transfers processed information to the people who will use it or to the activities for which it will be used.

Answer: d

Difficulty: Easy

Reference: p. 15

32. Converting raw data into a more meaningful form is called:

- a. capturing.
- b. processing.
- c. organizing.
- d. feedback.

Answer: b

Difficulty: Easy

Reference: p. 15

33. (Analysis)

An example of raw data from a national chain of automobile stores would be:

- a. an average of 13 Toyotas are sold daily in Kentucky.
- b. 30 percent increase in Toyota RAV 4 sales during September in Kentucky.
- c. 1 Toyota RAV4 sold March 3, 2005 in Louisville, Kentucky.
- d. all of the above.

Answer: c

Difficulty: Hard

Reference: p. 14

34. The field that deals with behavioral issues as well as technical issues surrounding the development, use, and impact of information systems used by managers and employees in the firm is called:

- a. information systems literacy.
- b. information systems architecture.
- c. management information systems.
- d. information technology infrastructure.

Answer: c

Difficulty: Medium

Reference: pp. 16–17

35. In a hierarchical organization, the upper levels consist of:

- a. managerial and professional employees.
- b. managerial, professional, and technical employees.
- c. professional and operational employees.
- d. managerial, professional, and operational employees.

Answer: b

Difficulty: Medium

Reference: p. 17

36. A hierarchy:

- a. is based on a clear-cut division of labor.
- b. is composed primarily of experts trained for different functions.
- c. is a pyramid structure of rising authority and responsibility.
- d. all of the above.

Answer: c

Difficulty: Easy

Reference: p. 17

37. The fundamental set of assumptions, values, and ways of doing things that has been accepted by most of a company's members is called its:

- a. culture.
- b. environment.
- c. atmosphere.
- d. values.

Answer: a

Difficulty: Easy

Reference: p. 18

38. Business processes:

- a. include informal work practices.
- b. are used primarily for sales and accounting functions.
- c. are governed by information technology.
- d. are logically related tasks used primarily by operational personnel.

Answer: a

Difficulty: Easy

Reference: p. 18

39. Data management technology consists of:

- a. the physical hardware and media used by an organization for storing data.
- b. the detailed, preprogrammed instructions that control and coordinate the computer hardware components in an information system.
- c. the software governing the organization of data on physical storage media.
- d. the hardware and software used to transfer data.

Answer: c

Difficulty: Medium

Reference: p. 19

40. The hardware and software used to transfer data in an organization is called:

- a. data management technology.
- b. networking and data management technology.
- c. data and telecommunications technology.
- d. networking and telecommunications technology.

Answer: d

Difficulty: Medium

Reference: p. 19

41. Networking and telecommunications technologies, along with computer hardware, software, data management technology, and the people required to run and manage them, constitute an organization's:

- a. data management environment.
- b. networked environment.
- c. IT infrastructure.
- d. information system.

Answer: c

Difficulty: Medium

Reference: pp. 19–20

42. An example of a business using information systems to create new products and services is:

- a. Wal-Mart's RetailLink system.
- b. the Mandarin Oriental hotel's customer-preference tracking system.
- c. Verizon's Web-based digital dashboard.
- d. Apple Inc.'s iPod.

Answer: d

Difficulty: Hard

Reference: p. 11

43. An example of a business using information systems to attain operational excellence is:
- a. Wal-Mart's RetailLink system.
 - b. the Mandarin Oriental hotel's customer-preference tracking system.
 - c. Verizon's Web-based digital dashboard.
 - d. Apple Inc.'s iPod.

Answer: a

Difficulty: Hard

Reference: p. 10

44. An example of a business using information systems for customer and supplier intimacy is:
- a. Wal-Mart's RetailLink system.
 - b. the Mandarin Oriental hotel's customer-preference tracking system.
 - c. Verizon's Web-based digital dashboard.
 - d. Apple Inc.'s iPod.

Answer: b

Difficulty: Medium

Reference: p. 11

45. Maintaining the organization's financial records is a business function of:
- a. accounting.
 - b. finance.
 - c. sales.
 - d. marketing.

Answer: a

Difficulty: Easy

Reference: p. 18

46. *(Evaluation)*

Based on the examples in the chapter, if you were asked to formulate a plan for a regional drive-in restaurant chain's efforts to use information technology to attract customers, what would be the best use of information technology from the list below:

- a. Use IT to increase supplier loyalty.
- b. Use IT to increase operational efficiency.
- c. Use IT to create new products and business models.
- d. Use IT to help survive government reporting requirements.
- e. Use IT to achieve customer intimacy.

Answer: e

Difficulty: Hard

Reference: p. 11

(Evaluation in the sense of appraise, assess, estimate, judge)

47. *(Analyze)*

The fact that online advertising revenues are growing at 30% a year, while offline traditional advertising is growing at about 5% a year, suggests that:

- a. Internet advertising is very inexpensive.
- b. offline traditional advertising is not very effective.
- c. the Internet is transforming the traditional advertising business model.
- d. new technologies are more efficient at selling to customers.

Answer: c

Difficulty: Hard

Reference p. 11

48. Toyota Motor Europe's vehicle orders management system allows it to improve efficiency by basing vehicle production on:

- a. superior forecasts of regional demand.
- b. actual customer orders.
- c. improved decision making.
- d. customer preferences.

Answer: c

Difficulty: Hard

Reference: p. 3

49. In a business hierarchy, the level that is responsible for monitoring the daily activities of the business is:
- a. middle management.
 - b. service workers.
 - c. production management.
 - d. operational management.

Answer: d

Difficulty: Medium

Reference: p. 17

50. Which of the following are environmental actors that interact with an organization and its information systems?
- a. Customers
 - b. Suppliers
 - c. Regulatory agencies
 - d. All of the above

Answer: d

Difficulty: Medium

Reference: p. 15

51. From a business perspective, raw data is transformed systematically during various stages, transforming it into valuable information, in a process called:
- a. the information value chain.
 - b. the IT value chain.
 - c. information processing.
 - d. feedback.

Answer: a

Difficulty: Medium

Reference: p. 23

52. (*Application*)

A corporation that funds a political action committee, which in turn promotes and funds a political candidate who agrees with the values of that corporation, could be seen as investing in which main category of complementary assets?

- a. Managerial
- b. Governmental
- c. Social
- d. Organizational

Answer: c

Difficulty: Medium

Reference: p. 25

53. Apple Computer dominates the online legal music sales industry primarily because of a failure of recording label companies to:
- a. invest in technology.
 - b. adopt a new business model.
 - c. invest in complementary assets.
 - d. modernize their information value chain.

Answer: b

Difficulty: Medium

Reference: p. 24

54. An example of an organizational complementary asset is:
- a. using the appropriate business model.
 - b. as collaborative work environment.
 - c. laws and regulations.
 - d. all of the above.

Answer: a

Difficulty: Medium

Reference: p. 25

55. An example of a social complementary asset is:
- a. technology and service firms in adjacent markets.
 - b. training programs.
 - c. distributed decision-making rights.
 - d. all of the above.

Answer: a

Difficulty: Medium

Reference: p. 25

56. Disciplines that contribute to the technical approach to information systems are:
- a. computer science, engineering, and networking.
 - b. operations research, management science, and computer science.
 - c. engineering, utilization management, and computer science.
 - d. management science, computer science, and engineering.

Answer: b

Difficulty: Hard

Reference: p. 26

57. The discipline that focuses on mathematical techniques for optimizing parameters of organizations, such as transportation and inventory control is:
- a. management science.
 - b. MIS.
 - c. operations research.
 - d. utilization management.

Answer: c

Difficulty: Hard

Reference: p. 27

58. Sociologists study information systems with an eye to understanding:
- a. how systems affect individuals, groups, and organizations.
 - b. how human decision makers perceive and use formal information.
 - c. how new information systems change the control and cost structures within the firm.
 - d. the production of digital goods.
- Answer: a** **Difficulty: Medium** **Reference: p. 27**
59. Psychologists study information systems with an eye to understanding:
- a. how systems affect individuals, groups, and organizations.
 - b. how human decision makers perceive and use formal information.
 - c. how new information systems change the control and cost structures within the firm.
 - d. the production of digital goods.
- Answer: b** **Difficulty: Medium** **Reference: p. 27**
60. The costs for firms operating on a global scale have been drastically reduced by:
- a. networking technology.
 - b. investments in organizational complementary assets.
 - c. the Internet.
 - d. the rise of digital content.
- Answer: c** **Difficulty: Medium** **Reference: p. 7**
61. Key corporate assets are:
- a. intellectual property, core competencies, and financial and human assets.
 - b. production technologies and business processes for sales, marketing, and finance.
 - c. knowledge and the firm's tangible assets, such as goods or services.
 - d. time and knowledge.
- Answer: a** **Difficulty: Hard** **Reference: p. 7**
62. Overproduction or underproduction of goods and services, misallocation of resources, and poor response times are the results of a firm's having:
- a. poor relationships with suppliers.
 - b. poor relationships with customers.
 - c. inadequate information.
 - d. surplus of information.
- Answer: c** **Difficulty: Hard** **Reference: p. 12**

63. A firm that must invest in new information systems capabilities in order to comply with federal legislation can be said to be investing to achieve which business objective?
- a. Customer intimacy
 - b. Operational excellence
 - c. Survival
 - d. Improved reporting

Answer: c

Difficulty: Medium

Reference: p. 13

64. Which of the following would not be used as an input for an information system?
- a. Digital dashboard
 - b. Handheld computer
 - c. Bar-code scanner
 - d. Cell phone

Answer: a

Difficulty: Medium

Reference: p. 15

65. Which field of study focuses on both a behavioral and technical understanding of information systems?
- a. Sociology
 - b. Operations research
 - c. Economics
 - d. Management information systems

Answer: d

Difficulty: Medium

Reference: pp. 16–17

66. The three principle levels within a business organization hierarchy are:
- a. senior management, operational management, and service workers.
 - b. senior management, middle management, and operational management.
 - c. senior management, operational management, and information systems.
 - d. senior management, middle management, and service workers.

Answer: b

Difficulty: Hard

Reference: p. 17

67. Engineers, scientists, or architects, who design new products or services for a firm, belong to which level of a business hierarchy?
- a. Middle management
 - b. Production workers
 - c. Knowledge workers
 - d. Data workers

Answer: c

Difficulty: Medium

Reference: p. 17

68. Which main business function is responsible for maintaining employee records?

- a. Sales and marketing
- b. Human resources
- c. Finance and accounting
- d. Manufacturing and production

Answer: b

Difficulty: Easy

Reference: p. 18

69. An organizational element in the UPS tracking system described in the chapter is:

- a. the specification of procedures for identifying packages with sender and recipient information.
- b. monitoring service levels.
- c. promoting the company strategy of low-cost, superior service.
- d. the use of handheld computers and networks for managing package delivery.

Answer: a

Difficulty: Hard

Reference: p. 22

70. A managerial element in the UPS tracking system described in the chapter is:

- a. taking inventory.
- b. providing package status reports to customers.
- c. the decision to use automation.
- d. in-house package tracking software.

Answer: c

Difficulty: Medium

Reference: p. 22

Fill In the Blanks

71. **Information** is data that has been shaped into a form that is meaningful to human beings.

Difficulty: Easy

Reference: p. 14

72. **Feedback** is output returned to appropriate members of the organization to help them evaluate or correct the input stage.

Difficulty: Medium

Reference: p. 15

73. **The Internet** is a global network that uses universal standards to connect millions of different networks around the world.

Difficulty: Easy

Reference: p. 19

74. **Computer software** consists of the detailed, preprogrammed instructions that control and coordinate the computer hardware components in an information system.

Difficulty: Easy

Reference: p. 19

75. The **World Wide Web/Web/WWW** is a service provided by the Internet that uses universally accepted standards for storing, retrieving, formatting, and displaying information in a page format.

Difficulty: Easy

Reference: p. 19

76. **Extranets** are private corporate networks extended to authorized users outside the organization.

Difficulty: Easy

Reference: p. 19

77. The key elements of an organization are its people, structure, business processes, politics, and **culture**.

Difficulty: Medium

Reference: p. 18

78. In a **sociotechnical perspectiveview**, the performance of a system is optimized when both the technology and the organization mutually adjust to one another until a satisfactory fit is obtained.

Difficulty: Medium

Reference: p. 28

79. **Senior management** makes long-range strategic decisions about the firm's products and services.

Difficulty: Medium

Reference: p. 17

80. Investments in organization and management, such as investments in new business models and training, are also known as **organizational and management capital**.

Difficulty: Medium

Reference: p. 25

Essay Questions

81. **Define operational excellence. How can information systems help achieve it?**

Operational excellence is the achievement of higher levels of productivity, efficiency, and profitability. Information systems can help achieve operational excellence by improving communications to supplier and optimizing the supply chain. Information systems could help managers communicate with workers more efficiently, enable technological innovation in products, minimize warehouse overhead, and streamline distribution.

Difficulty: Medium

Reference: pp. 8–11

82. *(Synthesis)*

You work for an auto manufacturer and distributor. How could you use information systems to achieve greater customer intimacy?

You could create a Web site that allows customers to customize cars, communicate with support personnel and other car owners. You could create an automated e-mail service reminding car owners to take their car in for periodic checkups. You could have an information system that tracks customer preferences in local areas, so you can provide cars that reflect local customer needs and desires.

Difficulty: Hard

Reference: p. 11

Synthesis in terms of bringing knowledge together

83. **What is the difference between information technology and information systems? Describe some of the functions of information systems.**

Information technology (IT) consists of all the hardware and software that a firm needs to use to achieve its business objectives. Information systems are more complex. An information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making and control in an organization.

An information system:

- Supports decision making, coordination, and control
- Helps employees analyze problems
- Helps employees visualize complex subjects
- Helps create new products

Difficulty: Medium

Reference: p. 14

84. *(Synthesis)*

You are a marketing manager for a national movie theater chain. Give an example of data that your department could use for creating meaningful information. What type of information could that data produce?

Movie ticket sales from individual theaters would be an example of raw data. Meaningful information from this would be: average number of tickets sold to seniors on certain days of the week.

Difficulty: Hard

Reference: p. 14

(Synthesis in terms of bringing knowledge together)

85. *(Synthesis)*

Define business process. What might be a business process used at a hospital?

A business process is a set of logically related tasks and behaviors for accomplishing work. Hiring a new employee, customer intake, and filing medical records are examples of business processes at a hospital.

Difficulty: Medium

Reference: p. 7

(Synthesis in terms of bringing knowledge together)

86. *(Synthesis)*

You are starting a small bike messenger company. Given your type of services (hand-delivering packages within a small geographical area), could your firm be a digital firm? If so, what would make this a digital firm?

Being a digital firm doesn't purely rely on having digital goods and services. A digital firm would have most of its relationships with customers, suppliers, and employees be digitally enabled. Ordering deliveries, assigning deliveries, managing employees and assignments could certainly be digitally enabled; using cell phones, information systems, and handheld devices to connect customers, delivery management, and bike messengers.

Difficulty: Hard

Reference: p.7

(Synthesis in terms of model)

87. (Evaluation)

This chapter discusses how each organization has its own culture and sets of values shared by most of its members. What kind of shared values might you find at a law firm?

Shared values at a law firm might be: The legal system works, the legal system is fair, lawyers help people, and people need help with the legal system because it is complicated.

Difficulty: Medium

Reference: p. 18

(Evaluation in terms of assess, choose)

88. (Synthesis)

You work at the business headquarters for a chain of movie theaters. Describe this firm's information value chain.

An information value chain adds value to data at various stages, transforming it into valuable data. At a chain of movie theaters, data would be gathered from ticket sales and concession sales. Information systems would help transform this into meaningful information, such as determining the types of movies popular in certain regions, times and days of the week that people most often saw movies, what snacks were the most popular. This information would be valuable in making decisions, such as offering ticket discounts during less popular time slots, and offering more popular snack items. Further feedback based on the results of these decisions could determine whether these decisions were effective.

Difficulty: Hard

Reference: pp. 22–23

(Synthesis in terms of propose, model)

89. (Evaluation)

Which dimension of information systems do you feel was the most important source of problems discussed in this chapter's study of the Morgan Stanley and Dean Witter merger? Why?

Student answers will vary. The following is an example of a possible answer: The problems with the merger were primarily technical. The employees at Retail Brokerage felt underappreciated because their information systems were antiquated. Brokers had to work overtime and clients did not receive good information from reports or the Web site. This led to both customers and brokers leaving the firm. In addition, the CEO Philip Purcell underestimated investing in technology, placing the company in a poor position when the market rebounded. In discussing the company's problems, Chief Executive Mack stated that divisions of Morgan Stanley had not received the technology they needed.

Difficulty: Hard

Reference: p. 35

(Evaluation in terms of appraise, assess)

90. *(Evaluate)*

In the Accenture case, the company information systems allow for a highly decentralized organization without a traditional headquarters. Based on your reading of Chapter 1, which of the six strategic business objectives does Accenture's information systems contribute to?

Student answers will vary. The following is an example of a possible answer: Accenture's information systems allow its mobile workforce to be within easy, constant reach of its customers, contributing to the business objective of customer and supplier intimacy. Additionally, the ability of employees to connect to and work with local branch information systems in standard ways, regardless of their location, contributes to more efficient processes and operational excellence.

Difficulty: Medium

Reference: pp. 8–13

(Evaluate in terms of appraise, choose)