

Chapter 2—Information Systems and Knowledge Management

TRUE/FALSE

1. Data, information, and intelligence all have the potential to create value to a firm through better decision making.

ANS: T REF: Data, Information, and Intelligence Equal Value
NAT: BUSPROG: Analytic

2. Relevant data are facts about things that cannot be changed.

ANS: F
Relevant data are facts about things that *can* be changed, and if they are changed, it will materially alter the situation.

REF: The Characteristics of Valuable Information
NAT: BUSPROG: Analytic

3. Timeliness means that the data are not more than a few years old.

ANS: F
Timeliness means that the data are current enough to still be relevant.

REF: The Characteristics of Valuable Information
NAT: BUSPROG: Analytic

4. Big data is large quantities of data taken from a single source.

ANS: F
Big data is taken from multiple, varied sources.

REF: Introduction NAT: BUSPROG: Analytic

5. One way to describe marketing research is to categorize it based on the four possible functions that it serves in business: foundational, testing, issues, and validation.

ANS: F
One way to describe marketing research is to categorize it based on the four possible functions that it serves in business: foundational, testing, issues, and *performance*.

REF: Decision Support Systems NAT: BUSPROG: Analytic

6. The purpose of a decision support system is to store data and transform data into information that is easily accessible to marketing managers.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic| BUSPROG: Technology

7. The goal of a CRM system is to describe customer relationships so that managers can access information themselves.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic

8. A decision support system requires databases but not software.

ANS: F
A decision support system requires both databases and software.

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

9. A data warehouse is the multitiered computer storehouse of current and historical data.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

10. Input data can come from internal sources of the organization, but not from external sources.

ANS: F
Input data come from both internal and external sources.

REF: Decision Support Systems NAT: BUSPROG: Analytic

11. An organization's salesforce frequently provides important marketing intelligence information.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic

12. Modern technology provides new ways of tracking human behavior.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

13. Global information systems allow management to track the whereabouts of delivery personnel.

ANS: F
This describes global positioning satellite (GPS) systems.

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

14. Scanner data refers to the accumulated records resulting from point of sale data recordings.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic| BUSPROG: Technology

15. Web tracking is illegal.

ANS: F
Web tracking is a legal activity in which marketing researchers monitor trends and information posted by consumers that pertains to the company's brand or products.

REF: Decision Support Systems
NAT: BUSPROG: Analytic| BUSPROG: Technology

16. Electronic data interchange (EDI) refers to linking computerized data sources to statistical tools that can search for predictive relationships and trends, allowing for more accurate predictions of consumers' opinions and actions.

ANS: F

Predictive analytics refers to linking computerized data sources to statistical tools that can search for predictive relationships and trends, allowing for more accurate predictions of consumers' opinions and actions.

REF: Decision Support Systems

NAT: BUSPROG: Analytic| BUSPROG: Technology

17. A party that maintains Web sites on the World Wide Web is called a content provider.

ANS: T REF: Database Sources and Vendors

NAT: BUSPROG: Analytic| BUSPROG: Technology

18. Google is a popular search engine.

ANS: T REF: Decision Support Systems

NAT: BUSPROG: Analytic| BUSPROG: Technology

19. Environmental scanning entails all information gathering designed to detect changes in the external operating environment of the firm.

ANS: T REF: Database Sources and Vendors

NAT: BUSPROG: Analytic

20. Data and information can be delivered to consumers or other end users via either primary technology or secondary technology.

ANS: F

Data and information can be delivered via either *pull* technology or *push* technology.

REF: Database Sources and Vendors

NAT: BUSPROG: Analytic| BUSPROG: Technology

21. Market dynamism represents the rate of change in environmental and competitive factors.

ANS: T REF: The Characteristics of Valuable Information

NAT: BUSPROG: Analytic

22. Data files in cloud storage can only be accessed through a company's Intranet.

ANS: F

Data files in cloud storage are directly accessible via the Internet.

REF: Decision Support Systems

NAT: BUSPROG: Analytic| BUSPROG: Technology

23. Proprietary marketing research refers to research projects conducted to study specific company problems.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic

24. UPC refers to bar-coded information containing product information that can be read by optical scanners.

ANS: T REF: Decision Support Systems
NAT: BUSPROG: Analytic

25. A search-engine optimizer mines data from in-store point-of-sale data recordings.

ANS: F
A search-engine optimizer mines Internet data to provide consulting to firms who wish to move up the listing of hits for terms related to their product category.

REF: Decision Support Systems
NAT: BUSPROG: Analytic| BUSPROG: Technology

MULTIPLE CHOICE

1. Facts or recorded measures of certain phenomena (things or events) are known as ____.
- a. data
 - b. information
 - c. market intelligence
 - d. knowledge

ANS: A REF: Introduction
NAT: BUSPROG: Analytic

2. Which term describes a subset of data and information that actually has some explanatory power to enable effective decisions to be made?
- a. knowledge
 - b. intellectual capital
 - c. market intelligence
 - d. decision support system

ANS: C REF: Data, Information, and Intelligence Equal Value
NAT: BUSPROG: Analytic

3. Which characteristic is LEAST important in evaluating the value of information?
- a. timeliness
 - b. relevance
 - c. completeness
 - d. consistency

ANS: D REF: The Characteristics of Valuable Information
NAT: BUSPROG: Analytic

4. The data characteristic that refers to the degree to which data represent the true situation is known as ____.
- a. timeliness
 - b. completeness
 - c. quality

d. relevance

ANS: C REF: The Characteristics of Valuable Information
NAT: BUSPROG: Analytic

5. Structured data openly shared between companies is called ____.
- big data
 - open source information
 - universal product codes
 - scanner data

ANS: B REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

6. Which term refers to an organized collection of computer hardware, software, data, and personnel designed to capture, store, update, manipulate, analyze, and immediately display information about worldwide business activities?
- Internet
 - Intranet
 - global information system
 - global positioning satellite system

ANS: C REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

7. Harold is conducting marketing research to determine what consumer segment his company should serve with its services. Which function is this marketing research serving?
- testing
 - issues
 - foundational
 - performance

ANS: C REF: Decision Support Systems
NAT: BUSPROG: Analytic

8. Who provides data access directly to the end consumer for a fee?
- content providers
 - data wholesalers
 - search engine sites
 - data retailers

ANS: D REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

9. Which part of the decision support system addresses exchanges between the firm and its customers?
- customer relationship management (CRM) system
 - data warehouse
 - global information system (GIS)
 - intellectual capital system

ANS: A REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

10. An organization's mailing list of current customers is an example of a ____.
- cookie
 - script

- c. database
- d. hyperlink

ANS: C REF: Decision Support Systems
NAT: BUSPROG: Analytic

11. The process that allows important day-to-day operational data to be stored and organized for simplified access is called ____.
- a. global information tracking
 - b. data warehousing
 - c. proprietary marketing
 - d. keyword searching

ANS: B REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

12. An organization's inventory figures are a good example of ____.
- a. cookies
 - b. internal records
 - c. external records
 - d. CRM

ANS: B REF: Decision Support Systems
NAT: BUSPROG: Analytic

13. Which source of input data is represented when a company conducts marketing research to identify the characteristics of its customers?
- a. internal records
 - b. proprietary marketing research
 - c. salesperson input
 - d. behavioral tracking

ANS: B REF: Decision Support Systems
NAT: BUSPROG: Analytic

14. An example of behavioral tracking is ____.
- a. product sales histories
 - b. test market results
 - c. supermarket scanner data
 - d. survey findings

ANS: C REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

15. A small microchip used to communicate with data systems is called a(n) ____.
- a. RFID
 - b. URL
 - c. NFC
 - d. HIPAA

ANS: A REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

16. Procter & Gamble regularly monitors trends and information posted about their products and brands by consumers on several Web sites. Which source of data input does this represent?
- a. scanner data

- b. Internet records
- c. behavioral tracking
- d. Web tracking

ANS: D REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

17. LexisNexis is a company that puts together consortia of data sources into packages that are offered to municipal, corporate, and university libraries for a fee. LexisNexis is an example of a data ____.
- a. compiler
 - b. wholesaler
 - c. warehouse
 - d. miner

ANS: B REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

18. CompuStat, which publishes financial data, such as income statements and balance sheets, is an example of which type of database?
- a. statistical database
 - b. financial database
 - c. video database
 - d. electronic interchange database

ANS: B REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

19. Wal-Mart transmits information electronically each day to Wrangler jeans about unit sales of this product in its retail outlets so that Wrangler can replenish Wal-Mart's inventory on an as-needed basis. What term describes this function?
- a. cookies
 - b. EDI
 - c. pull technology
 - d. data transference

ANS: B REF: Decision Support Systems
NAT: BUSPROG: Analytic | BUSPROG: Technology

20. Laurie finds the perfect sweater on Talbot's Web site during its season's clearance sale, but is unable to purchase it in her size. The following year, Talbot's sends Laurie an email notifying her of a similar sweater in the same style and color. Talbot's has linked computerized data sources to statistical tools to search for relationships that will produce more effective marketing communications, which is an example of ____.
- a. electronic data interchange
 - b. Web tracking
 - c. pull technology
 - d. predictive analytics

ANS: D REF: Database Sources and Vendors
NAT: BUSPROG: Analytic | BUSPROG: Technology

21. Parties that furnish information on the World Wide Web are called ____.
- a. browsers
 - b. content providers
 - c. search engines

d. Intranets

ANS: B REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

22. Data collected in an open data partnership is ____.
- available only to the researchers gathering the information
 - available to the consumers from whom researchers gather the information
 - made publicly available on the Internet
 - sold to the consumers from whom researchers gather the information

ANS: B REF: Data Technology and Ethics
NAT: BUSPROG: Analytic |BUSPROG: Technology

23. A Web site address that Web browsers recognize is called a(n) ____.
- URL
 - EDI
 - DSS
 - UPC

ANS: A REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

24. Yahoo! and Google are examples of ____.
- home pages
 - search engines
 - ISPs
 - CRMs

ANS: B REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

25. Melanie is using the Internet to gather information designed to detect changes in her company's external operating environment. What is Melanie performing?
- environmental scanning
 - behavioral tracking
 - search engine marketing
 - electronic data interchange

ANS: A REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

26. Amazon.com recommends books for purchase when a customer who has ordered books from Amazon previously returns to the site. This is an example of ____.
- push technology
 - electronic data interchange
 - pull technology
 - a URL

ANS: A REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

27. An Internet user sets up his computer so that it will send him regular news about his favorite professional football team. What application is in use?
- push technology
 - pull technology

- c. smart agent software
- d. RFID

ANS: C REF: Database Sources and Vendors

NAT: BUSPROG: Analytic |BUSPROG: Technology

28. When you visit Web sites, most likely, a small computer file that records your Web usage history is created. This small computer file is called a(n) ____.
- a. electronic data exchange
 - b. cookie
 - c. URL
 - d. intranet

ANS: B REF: Database Sources and Vendors

NAT: BUSPROG: Analytic |BUSPROG: Technology

29. Most companies use a private data network that uses Internet standards and technology, but only allows those individuals whom the organization deems as appropriate participants to access data. This is an example of a(n) ____.
- a. Intranet
 - b. smart network
 - c. internal source
 - d. content provider

ANS: A REF: Database Sources and Vendors

NAT: BUSPROG: Analytic |BUSPROG: Technology

30. Which technique covertly discovers and records the websites that consumers visit?
- a. cloud storage
 - b. history sniffing
 - c. RFID tags
 - d. Boolean operators

ANS: B REF: Data Technology and Ethics

NAT: BUSPROG: Ethics |BUSPROG: Technology

COMPLETION

1. In information technology, _____ is data formatted (structured) to support decision-making or define the relationship between two facts.

ANS: information

REF: Data, Information, and Intelligence Equal Value

NAT: BUSPROG: Analytic

2. Information that is accurate, valid, and reliable is said to be of high _____.

ANS: quality

REF: The Characteristics of Valuable Information NAT:

BUSPROG: Analytic

3. Information that is provided when a marketing manager needs it to make an important decision is said to be _____.

ANS: timely

REF: The Characteristics of Valuable Information NAT: BUSPROG: Analytic

4. When a marketing manager has sufficient information to make a good decision, the information is said to be _____.

ANS: complete

REF: The Characteristics of Valuable Information NAT: BUSPROG: Analytic

5. A computer-based system that helps marketing managers to solve problems through interaction with databases is known as a(n) _____.

ANS:
decision support system
DSS

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

6. A decision support system that gathers information about customers such as sales history and customer preferences is known as a(n) _____ system.

ANS:
customer-relationship management
customer relationship management
CRM

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

7. Numerical, text, voice, and image data that enter a decision support system are known as _____.

ANS: input

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

8. _____ data refers to the accumulated records resulting from point of sale data recordings.

ANS: Scanner

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

9. A(n) _____ occurs when one company's computer system is integrated with another company's computer system.

ANS:
electronic data interchange
EDI

REF: Decision Support Systems
NAT: BUSPROG: Analytic |BUSPROG: Technology

10. _____ refers to linking computerized data sources to statistical tools that can search for predictive relationships and trends, allowing for more accurate prediction of consumers' opinions and actions.

ANS: Predictive analytics

REF: Marketing Analytics
NAT: BUSPROG: Analytic |BUSPROG: Technology

11. Parties that furnish information on the World Wide Web are called _____.

ANS: content providers

REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

12. A Web site address that Web browsers recognize is called a(n) _____.

ANS:
Uniform Resource Locator
URL

REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

13. A computerized directory that allows users to search the World Wide Web for information based on a keyword search is called a(n) _____.

ANS: search engine

REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

14. _____ technology refers to users requesting information from a Web page and the browser, and then determining a response.

ANS: Pull

REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

15. A company's private computer network that uses Internet standards, but which is accessible only by its own employees, is known as a(n) _____.

ANS: Intranet

REF: Database Sources and Vendors
NAT: BUSPROG: Analytic |BUSPROG: Technology

ESSAY

1. Explain how data, information, and intelligence represent value to a firm.

ANS:

Data are simply facts or recorded measures of certain phenomena (things or events). **Information** is data formatted (structured) to support decision making or define the relationship between two facts. **Market intelligence** is the subset of data and information that actually has some explanatory power enabling effective decisions to be made. Marketing managers may not be as intimately involved in finding and analyzing data, however, the decisions that they make based on the input received from research will make or break the firm. In this way, data, information, and intelligence all have the potential to create value to the firm through better decision making.

REF: Data, Information, and Intelligence Equal Value

NAT: BUSPROG: Analytic |BUSPROG: Communication

2. Name and describe the four characteristics that help determine how valuable data may be to marketing researchers and managers.

ANS:

These four characteristics help determine how valuable data may be:

Relevance: reflects how pertinent these particular facts are to the situation at hand. Relevant data are facts about things that can be changed, and if they are changed, it will materially alter the situation.

Quality: the degree to which data represent the true situation. High-quality data are accurate, valid, and reliable.

Timeliness: the data are current enough to still be relevant.

Completeness: refers to having the right amount of information.

REF: The Characteristics of Valuable Information

NAT: BUSPROG: Analytic |BUSPROG: Communication

3. Explain what a decision support system (DSS) is and how it helps marketing managers.

ANS:

A **marketing decision support system (DSS)** is a system that helps decision makers confront problems through direct interaction with computerized databases and analytical software programs. The purpose of a DSS is to store data and transform them into organized information that is easily accessible to marketing managers. Doing so saves managers time so that decisions that might take days or even weeks otherwise can be made in minutes using a DSS. A DSS requires both databases and software. Modern decision support systems greatly facilitate customer relationship management (CRM), which is a system that is part of the DSS that address exchanges between the firm and its customers.

REF: Decision Support Systems

NAT: BUSPROG: Analytic |BUSPROG: Communication| BUSPROG: Technology

4. Define predictive analytics and discuss a marketing researcher's job in predictive analytics.

ANS:

Broadly speaking, **predictive analytics** refers to linking computerized data sources to statistical tools that can search for predictive relationships and trends which allow more accurate prediction of consumers' opinions and actions. Software companies like SPSS and SAS offer products that both look for data and then use statistical tools to reveal key predictive relationships. A marketing researcher's job in predictive analytics is twofold: (1) identify the key sources of information that may create predictive intelligence and (2) use analytic tools to build predictive models.

REF: Marketing Analytics

NAT: BUSPROG: Analytic |BUSPROG: Communication| BUSPROG: Technology

5. Compare and contrast pull technology and push technology.

ANS:

Data and information can be delivered to consumers or other end users via either pull technology or push technology. Conventionally, **pull technology** refers to consumers requesting information from a Web page and the browser then determines a response. Thus, the consumer is essentially asking for the data. In this case, it is said to be pulled through the channel. The opposite of pull is push. **Push technology** sends data to a user's computer without a request being made. In other words, software is used to guess what information might be interesting to consumers based on the patterns of previous responses. Push technology allows personalized information to be delivered to consumers without the need for them to even be physically at their Internet device.

REF: Database Sources and Vendors

NAT: BUSPROG: Analytic |BUSPROG: Communication| BUSPROG: Technology