**Information Systems and Knowledge Management**

**TRUE/FALSE**

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

ANS: T

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.

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.

4. Knowledge management is the process of creating an inclusive, comprehensive, easily accessible organizational memory, which can be called the organization’s intellectual capital.

ANS: T

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

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

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

ANS: T

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

ANS: F

A decision support system requires both databases and software.

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

ANS: T

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.

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

ANS: T

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

ANS: T

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

ANS: F

This describes global positioning satellite (GPS) systems.

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

ANS: T

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.

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

ANS: F

This describes predictive analytics.

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

ANS: T

18. Google is a popular search engine.

ANS: T

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

ANS: T

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.

**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 |
| e. | value |

ANS: A

2. Which of the following is a subset of data and information that actually has some explanatory power enabling effective decisions to be made?

|  |  |
| --- | --- |
| a. | knowledge |
| b. | intellectual capital |
| c. | market intelligence |
| d. | decision support system |

ANS: C

3. All of the following are important characteristics used to evaluate the value of information EXCEPT:

|  |  |
| --- | --- |
| a. | timeliness |
| b. | relevance |
| c. | completeness |
| d. | consistency |

ANS: D

4. Which of the following data characteristic refers to the degree to which data represent the true situation?

|  |  |
| --- | --- |
| a. | timeliness |
| b. | completeness |
| c. | quality |
| d. | relevance |

ANS: C

5. Which of the following represents a blend of previous experience, insight, and data that forms organizational memory?

|  |  |
| --- | --- |
| a. | data |
| b. | knowledge |
| c. | market intelligence |
| d. | information |

ANS: B

6. Which of the following is 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?

|  |  |
| --- | --- |
| a. | Internet |
| b. | Intranet |
| c. | global information system |
| d. | global positioning satellite system |

ANS: C

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?

|  |  |
| --- | --- |
| a. | testing |
| b. | issues |
| c. | foundational |
| d. | performance |

ANS: C

8. Who can provide data to a decision support system?

|  |  |
| --- | --- |
| a. | production managers |
| b. | marketing researchers |
| c. | accountants |
| d. | all of the above |

ANS: D

9. Which part of the decision support system addresses exchanges between the firm and its customers?

|  |  |
| --- | --- |
| a. | customer relationship management (CRM) system |
| b. | data warehouse |
| c. | global information system (GIS) |
| d. | intellectual capital system |

ANS: A

10. An organization's mailing list of current customers is an example of:

|  |  |
| --- | --- |
| a. | a cookie |
| b. | software |
| c. | a database |
| d. | a hyperlink |

ANS: C

11. Which of the following is a process that allows important day-to-day operational data to be stored and organized for simplified access?

|  |  |
| --- | --- |
| a. | global information system |
| b. | data warehousing |
| c. | proprietary marketing research |
| d. | keyword search |

ANS: B

12. An organization's inventory figures are a good example of:

|  |  |
| --- | --- |
| a. | cookies |
| b. | internal records |
| c. | external records |
| d. | CRM |

ANS: B

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

14. Which of the following is an example of behavioral tracking?

|  |  |
| --- | --- |
| a. | product sales histories |
| b. | test market results |
| c. | supermarket scanner data |
| d. | survey findings |

ANS: C

15. Data which relates purchase information with promotional exposures and advertising frequency data by particular households are known as:

|  |  |
| --- | --- |
| a. | single-source data |
| b. | multiple-source data |
| c. | cookies |
| d. | environmental scanning data |

ANS: A

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

17. LEXIS-NEXIS is a company that puts together consortia of data sources into packages that are offered to municipal, corporate, and university libraries for a fee. LEXIS-NEXIS is an example of a:

|  |  |
| --- | --- |
| a. | data compiler |
| b. | data wholesaler |
| c. | data warehouse |
| d. | data miner |

ANS: B

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

19. When 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, this is an example of:

|  |  |
| --- | --- |
| a. | cookies |
| b. | EDI |
| c. | the Internet |
| d. | data transference |

ANS: B

20. Talbot’s, a women’s clothing retailer, sent Laurie an email notifying her of one the sweaters they are offering this year in a style and color she had searched for on its Web site during last season’s clearance sale but was unable to purchase in her size. Talbot’s was linking computerized data sources to statistical tools to search for predictive relationships to enable more effective marketing communications, which is an example of:

|  |  |
| --- | --- |
| a. | electronic data interchange |
| b. | Web tracking |
| c. | pull technology |
| d. | predictive analytics |

ANS: D

21. Parties that furnish information on the World Wide Web are called:

|  |  |
| --- | --- |
| a. | browsers |
| b. | content providers |
| c. | search engines |
| d. | Intranets |

ANS: B

22. What is the opening screen of a Web site called?

|  |  |
| --- | --- |
| a. | cookie |
| b. | home page |
| c. | hyperlink |
| d. | browser |

ANS: B

23. A Web site address that Web browsers recognize is called a(n):

|  |  |
| --- | --- |
| a. | URL |
| b. | EDI |
| c. | DSS |
| d. | UPC |

24. Yahoo! and Google are examples of:

|  |  |
| --- | --- |
| a. | home pages |
| b. | search engines |
| c. | ISPs |
| d. | CRMs |

ANS: B

25. Melanie is using the Internet to gather information designed to detect changes in her company’s external operating environment. What is Melanie performing?

|  |  |
| --- | --- |
| a. | environmental scanning |
| b. | behavioral tracking |
| c. | search engine marketing |
| d. | electronic data interchange |

ANS: A

26. When 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:

|  |  |
| --- | --- |
| a. | push technology |
| b. | electronic data interchange |
| c. | pull technology |
| d. | a URL |

ANS: A

27. When an Internet user sets up his computer so that it will send him regular news about his favorite professional football team, this is an example of the application of:

|  |  |
| --- | --- |
| a. | push technology |
| b. | pull technology |
| c. | smart agent software |
| d. | RFID |

ANS: C

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

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

30. Which of the following is a collaborative effort involving just over 200 universities, government entities, and sixty corporations?

|  |  |
| --- | --- |
| a. | Intranet |
| b. | Internet2 |
| c. | Web2.0 |
| d. | smart agent network |

ANS: B

**COMPLETION**

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

ANS: information

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

ANS: quality

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

ANS: timely

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

ANS: complete

5. A computer-based system that helps marketing managers to solve problems through interaction with databases is known as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

ANS:

decision support system

DSS

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

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

ANS: input

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

ANS: Scanner

9. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occurs when one company's computer system is integrated with another company's computer system.

ANS:

electronic data interchange

EDI

10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 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.

ANS: Predictive analytics

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

ANS: content providers

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

ANS:

Uniform Resource Locator

URL

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

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

ANS: Pull

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

ANS: Intranet

**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.

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

ANS:

The four characteristics that help determine how valuable data may be are:

**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.

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 mangers 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.

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.

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.