Chapter 01:An Introduction to Information Systems

TRUE/FALSE

1. Information and data are essentially the same thing.

   ANS: F PTS: 1 REF: 5

2. Computers are required to organize or process data.

   ANS: F PTS: 1 REF: 7

3. Using a computer to forecast future sales and order more inventory before a shortage can occur is an example of information system feedback.

   ANS: T PTS: 1 REF: 12

4. A CBIS is a single set of hardware, software, databases, telecommunications, people, and procedures configured to collect, manipulate, store, and process data into information.

   ANS: T PTS: 1 REF: 12

5. The technology infrastructure is a set of shared IS resources that form the foundation of each computer-based information system.

   ANS: T PTS: 1 REF: 12

6. Today's more advanced processor chips have the power of 1990s-era supercomputers.

   ANS: T PTS: 1 REF: 13

7. Teraflops is a measure of computer storage capacity.

   ANS: F PTS: 1 REF: 13

8. Application software such as Windows Vista and Windows Seven control basic computer operations such as start-up and printing.

   ANS: F PTS: 1 REF: 14

9. Software is needed for computers of all sizes from cell phones and small hand held devices to the largest supercomputers.

   ANS: T PTS: 1 REF: 14

10. Private cloud computing applications are available to everyone.

    ANS: F PTS: 1 REF: 15

11. Information about the documents on the Web and access to these documents are controlled and provided by tens of thousands of special computers called Web servers.

ANS: T PTS: 1 REF: 16

12. A virtual reality system is an example of one of the most common types of information systems.

ANS: F PTS: 1 REF: 18

13. Transaction processing systems were developed in the 1950s.

ANS: T PTS: 1 REF: 18

14. C2C stands for computer-to-computer e-commerce.

ANS: F PTS: 1 REF: 20

15. DSS systems were first developed over 30 years ago.

ANS: T PTS: 1 REF: 23

16. Mobile commerce is the use of mobile, wireless devices to place orders and conduct business.

ANS: T PTS: 1 REF: 20

17. While technologically advanced, unfortunately, e-commerce offers few advantages for streamlining work activities.

ANS: F PTS: 1 REF: 20

18. Electronic business goes beyond e-commerce and e-procurement by using information systems and the Internet to perform all business-related tasks and functions.

ANS: T PTS: 1 REF: 20

19. Computers have been used to perform common business applications since the 1950s.

ANS: T PTS: 1 REF: 21

20. Companies soon learned that they could use the data stored in transaction processing systems to make better decisions.

ANS: T PTS: 1 REF: 22

21. A decision support system is an organized collection of people, procedures, software, databases, and devices that provides routine information to managers and decision makers.

ANS: F PTS: 1 REF: 22

22. MISs typically provide standard reports generated with data and information from a TPS or ERP system

ANS: T PTS: 1 REF: 22

23. MIS reports may be generated daily, weekly, monthly, or yearly.

ANS: T PTS: 1 REF: 23

24. A DSS can include a collection of models to support a decision maker, a collection of facts, and procedures that help decision makers to interact with the DSS.

ANS: T PTS: 1 REF: 24

25. DSS became more widely used in the 1980s as a result of dramatic improvements in technology.

ANS: T PTS: 1 REF: 23

26. With an AI system, the computer takes on the characteristics of human intelligence.

ANS: T PTS: 1 REF: 25

27. Neural networks give the computer the ability to make suggestions and function like an expert in a particular field, helping enhance the performance of a novice users.

ANS: F PTS: 1 REF: 27

28. The unique value of neural networks is that they allow organizations to capture and use the wisdom of experts and specialists.

ANS: F PTS: 1 REF: 27

29. Directional sound, tactile and force feedback devices, voice recognition, and other technologies are used to enrich the virtual reality experience.

ANS: T PTS: 1 REF: 27

30. Systems analysis defines the problems and opportunities of the existing system.

ANS: T PTS: 1 REF: 29-30

MULTIPLE CHOICE

1. ____ is an important component of every information system that helps organizations to achieve their goals.
   a. Hardware
   b. Software
   c. Feedback mechanism
   d. Data

   ANS: C PTS: 1 REF: 4

2. The value of information is directly linked to how it helps decision makers achieve their organization's ____.
   a. profits
   b. goals
   c. cost reduction initiatives
   d. quality improvement measures

   ANS: B PTS: 1 REF: 8

3. In information systems, ____ is used to make changes to input or processing activities.
   a. forecasting
   b. feedback
   c. output
   d. processing

   ANS: B PTS: 1 REF: 11

4. Many excellent computerized information systems follow stock indexes and markets and suggest when large blocks of stocks should be purchased or sold in a process called ____.
   a. feedback
   b. processing
   c. forecasting
   d. program trading

   ANS: D PTS: 1 REF: 12

5. _____ consists of computer equipment used to perform input, processing, and output activities.
   a. Information technology
   b. Technology infrastructure
   c. Telecommunications
   d. Hardware

   ANS: D PTS: 1 REF: 12

6. Keyboards, automatic scanning devices, and equipment that can read magnetic ink characters are examples of ____ hardware.
   a. storage
   b. processing
   c. output
   d. input

   ANS: D PTS: 1 REF: 13

7. The One Laptop per Child computer costs ____.

   a. under $100
   b. under $200
   c. between $200 - $400
   d. over $400

   ANS: B PTS: 1 REF: 13

8. ____ consists of computer programs that govern the operation of the computer.
   a. Hardware
   b. Software
   c. Applications
   d. Telecommunications

   ANS: B PTS: 1 REF: 14

9. ____ is an example of application software that allows you to accomplish specific tasks such as word processing or tabulating numbers.
   a. Systems software
   b. Windows 7
   c. Microsoft Office 2010
   d. Windows Vista

   ANS: C PTS: 1 REF: 14

10. ____ connect computers and equipment in a building, around the country, or around the world to enable electronic communications.
    a. Telecommunications
    b. Telecommuting
    c. Networks
    d. Databases

    ANS: C PTS: 1 REF: 15

11. People can send short messages of up to ____ using Twitter.
    a. 10 words
    b. 100 characters
    c. 140 characters
    d. 140 words

    ANS: C PTS: 1 REF: 16

12. Another name for a Web log is ____.
    a. podcast
    c. blog

b. Web page
d. WWW

ANS: C PTS: 1 REF: 16

13. Using ____, you can download audio programs or music from the Internet to play on computers or music players.
a. podcasting
c. WWW
b. Web logs
d. cloud computing

ANS: A PTS: 1 REF: 16

14. An ____ is a network based on Web technologies that allows only selected outsiders, such as business partners and customers, to access authorized resources of a company's intranet.
a. Internet
c. Web 2.0
b. blog
d. extranet

ANS: D PTS: 1 REF: 16

15. ____ is (are) considered to be the most important element in a computer-based information system.
a. Hardware
c. Procedures
b. Software
d. People

ANS: D PTS: 1 REF: 17

16. People who work with information systems to get results are called ____.
a. the CIO
c. IS personnel
b. users
d. IS managers

ANS: B PTS: 1 REF: 17

17. ____ include(s) all the people who manage, run, program, and maintain the system, including the CIO, who manages the IS department.
a. End users
c. Analysts
b. Hardware operators
d. IS personnel

ANS: D PTS: 1 REF: 17

18. A common type of information system used in business organizations are those designed for ____.
a. electronic and mobile commerce
c. decision support
b. transaction processing
d. all of the above

ANS: D PTS: 1 REF: 18

19. ____ involves using information systems and the Internet to acquire parts and supplies.
a. e-commerce
c. mobile commerce
b. e-business
d. e-procurement

ANS: D PTS: 1 REF: 20

20. The earliest type of business information system developed in the 1950s was the ____.
a. transaction processing system
c. decision support system
b. enterprise resource planning system
d. e-commerce system

ANS: A PTS: 1 REF: 21

21. A(n) ____ is an organized collection of people, procedures, software, databases, and devices that support problem-specific decision making.

a. TPS
b. MIS
c. DSS
d. Virtual reality system

ANS: C PTS: 1 REF: 24

22. ____ involves computers understanding and acting on verbal or written commands in English, Spanish, or other human languages.
a. Virtual reality
b. Artificial intelligence
c. Natural language processing
d. Learning systems

ANS: C PTS: 1 REF: 26

23. ____ is a branch of artificial intelligence that allows computers to recognize and act on patterns or trends.
a. Vision systems
b. Neural networks
c. Robotic systems
d. Natural language processing

ANS: B PTS: 1 REF: 26

24. Hiring an outside company to perform some or all of a systems development project is called ____.
a. virtual reality
b. offshoring
c. systems investigation
d. outsourcing

ANS: D PTS: 1 REF: 29

25. The goal of the ____ phase of systems development is to gain a clear understanding of the problem to be solved or opportunity to be addressed.
a. systems analysis
b. systems investigation
c. systems design
d. systems implementation

ANS: B PTS: 1 REF: 29

COMPLETION

1. _____ data is a form of data that is represented by numbers, letters, and other characters.

ANS: alphanumeric

PTS: 1 REF: 6

2. _____ is the awareness and understanding of a set of information and the ways the information can be made useful to support a specific task or reach a decision.

ANS: Knowledge

PTS: 1 REF: 6

3. In information systems, _____ means converting or transforming data into useful outputs.

ANS: processing

PTS: 1 REF: 11

4. In information systems, the activity of gathering and capturing raw data is called _____.

   ANS: input

   PTS: 1 REF: 11

5. Predicting future events to avoid problems is called _____.

   ANS: forecasting

   PTS: 1 REF: 12

6. _____ refers to hardware, software, databases, and telecommunications.

   ANS: Information technology

   PTS: 1 REF: 12

7. Computerized _____ are being placed in vehicles to record vehicle speed, possible engine problems, driver performance, and more.

   ANS: event data recorders

   PTS: 1 REF: 13

8. Although most software can be installed from CDs, many of today's software packages can be downloaded through the _____.

   ANS: Internet

   PTS: 1 REF: 14

9. A(n) _____ is an organized collection of facts and information, typically consisting of two or more related files.

   ANS: database

   PTS: 1 REF: 15

10. An approach to work called _____ that enables people to work from home or while traveling.

    ANS: telecommuting

    PTS: 1 REF: 15

11. The _____ is the world's largest computer network consisting of thousands of interconnected networks, all freely exchanging information.

    ANS: Internet

    PTS: 1 REF: 15

12. _____ allows people to get the information they need from the Internet instead of from desktop or corporate computers.

    ANS: Cloud computing

    PTS: 1 REF: 15

13. The _____ is a network of links on the Internet to documents containing text, graphics, video, and sound.

    ANS: World Wide Web or Web

    PTS: 1 REF: 16

14. The technology used to create the Internet is also being applied within companies and organizations to create _____, which allow people in an organization to exchange information and work on projects.

    ANS: intranets

    PTS: 1 REF: 16

15. _____ include the strategies, policies, methods, and rules for using the CBIS.

    ANS: Procedures

    PTS: 1 REF: 17

16. CBIS stands for _____.

    ANS: Computer-based information system

    PTS: 1 REF: 12

17. _____ involves any business transactions executed electronically between companies.

    ANS: E-commerce

    PTS: 1 REF: 20

18. An organized collection of people, procedures, software, databases, and devices used to record completed business transactions is called a(n) _____.

    ANS: transaction processing system

    PTS: 1 REF: 21

19. A(n) _____ is a set of integrated programs that manages the vital business operations for an entire multisite, global organization.

    ANS: Enterprise resource planning system

    PTS: 1 REF: 22

20. _____, a German software company, is one of the leading suppliers of ERP software.

    ANS: SAP

    PTS: 1 REF: 23

21. The focus of a DSS is on making effective _____ and helping a manager do the right thing.

    ANS: decisions

    PTS: 1 REF: 24

22. A system to create, store, share, and use the organization's knowledge and experience is called a(n) _____.

    ANS: knowledge management system

    PTS: 1 REF: 25

23. _____ is an area of artificial intelligence in which machines take over complex, dangerous, routine, or boring tasks.

    ANS: Robotics

    PTS: 1 REF: 26

24. The collection of rules, procedures, and relationships that must be followed by an expert system to achieve the proper outcome is contained in the expert system's _____.

    ANS: knowledge base

    PTS: 1 REF: 27

25. During the _____ phase of the systems development process the project team determines how the new system should be developed to meet the business needs defined during systems analysis.

    ANS: systems design

    PTS: 1 REF: 30

ESSAY

1. Briefly distinguish between data, information, and knowledge.

   ANS:

Data consists of raw facts, such as employee number or total hours worked in a week. Information is a collection of facts organized and processed so that they have additional value beyond the value of individual facts. Turning data into information is a process, a set of logically related tasks performed to achieve a defined outcome. The process of defining relationships among data to create useful information requires knowledge. Knowledge is the awareness and understanding of a set of information and the ways that information can be made useful to support a specific task or reach a decision.

PTS: 1 REF: 5-6

2. Define the term information system and briefly identify its fundamental components.

ANS:
An information system is a set of interrelated elements or components that collect, manipulate, store, and disseminate data and provide for a corrective reaction to meet an objective. The fundamental components include input, processing, output, and feedback. Input is the activity of gathering and capturing raw data. Processing involves converting data into useful output. It can be done manually or by using a computer. Output involves producing useful information, often in the form of documents and reports. Feedback is information from the system that is used to make changes to input or processing activities.

PTS: 1 REF: 10-11

3. What is meant by an organization's technology infrastructure and what are its components?

ANS:
An organization's technology infrastructure is a set of shared IS resources that form the foundation of each of its computer-based information systems. It includes all the hardware, software, databases, telecommunications, people, and procedures that are configured to collect, manipulate, store, and process data into information.

PTS: 1 REF: 12

4. Distinguish between the Internet and the Web.

ANS:
The Internet is the world's largest network consisting of thousands of interconnected networks, all freely exchanging information. People use the Internet to research information, buy and sell products and services, make travel arrangements, conduct banking, download music and videos, read books, and listen to radio programs, among other activities. The Web is one of many services available over the Internet. It is a network of links on the Internet to documents containing text, graphics, video, and sound. Information about the documents and access to them are controlled and provided by tens of thousands of special computers called Web servers.

PTS: 1 REF: 15-16

5. Distinguish between an MIS and DSS.

ANS:
An MIS provides routine information to managers and decision makers. The first MIS systems were developed in the 1960s and provide standard reports generated with data and information from a TPS or ERP system. DSS systems were first developed in the 1980s and used to support problem-specific decision making. The DSS employs a collection of models to support the decision maker, a collection of facts, and systems and procedures that help users interact with it.

PTS: 1 REF: 22-24