Business Information Systems

CREDIT HOURS
3

LEVEL
LOWER

EXAM CODE 221
CATALOG NUMBER BUSx221

PUBLISHED NOVEMBER 2017
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Before You Choose This UExcel Exam

**Uses for the Examination**

- Excelsior College, the test developer, recommends granting three (3) semester hours of lower-level undergraduate credit to students who receive a letter grade of C or higher on this examination.
- Other colleges and universities also recognize this exam as a basis for granting credit or advanced standing.
- Individual institutions set their own policies for the amount of credit awarded and the minimum acceptable grade.

Exam-takers who have applied to Excelsior College should ask their academic advisor where this exam fits within their degree program.

Exam-takers **not enrolled** in an Excelsior College degree program should check with the institution from which they wish to receive credit to determine whether credit will be granted and/or to find out the minimum grade required for credit. Those who intend to enroll at Excelsior College should ask an admissions counselor where this exam fits within their intended degree program.

**Examination Length and Scoring**

The examination consists of approximately 120 questions, most of which are multiple choice; for samples of all the item types on this exam, see the sample items in the back of this guide. Some items are unscored, pretest items. The pretest items are embedded throughout the exam and are indistinguishable from the scored items. You will have two (2) hours to complete the examination. Your score will be reported as a letter grade.

**UExcel Exam Resources**

**Excelsior College Bookstore**

The Excelsior College Bookstore offers recommended textbooks and other resources to help you prepare for UExcel exams.

The bookstore is available online at: www.excelsior.edu/bookstore

**UExcel Practice Exams**

The official UExcel practice exams are highly recommended as part of your study plan. Once you register for your UExcel exam, you are eligible to purchase the corresponding practice exam, which can be taken using any computer with a supported Web browser. Each practice exam includes two forms that you may take within a 180-day period.

**Excelsior College Library**

Enrolled Excelsior College students can access millions of authoritative resources online through the Excelsior College Library. Created through our partnership with the Sheridan Libraries of The Johns Hopkins University, the library provides access to journal articles, books, websites, databases, reference services, and many other resources. Special library...
pages relate to the nursing degree exams and other selected exams. To access it, visit www.excelsior.edu/library (login is required).

Our library provides:
- 24/7 availability
- The world’s most current authoritative resources
- Help and support from staff librarians

**Online Tutoring**

Excelsior College offers online tutoring through SMARTTHINKING™ to connect with tutors who have been trained in a variety of academic subjects. To access SMARTTHINKING, go to www.excelsior.edu/smartthinking. Once there, you may download a copy of the SMARTTHINKING Student Handbook as a PDF.

**MyExcelsior Community**

MyExcelsior Community enables Excelsior College students and alumni to interact with their peers online. As members, students can participate in real-time chat groups, join online study groups, buy and sell used textbooks, and share Internet resources. Enrolled students have automatic access from their MyExcelsior page. Visit www.excelsior.edu/myexcelsiorcommunity.

**Preparing for UExcel Exams**

**How Long Will It Take Me to Study?**

A UExcel exam enables you to show that you’ve learned material comparable to one or more 15-week college-level courses. As an independent learner, you should study and review as much as you would for a college course. For a 3-credit course in a subject they don’t know, most students would be expected to study nine hours per week for 15 weeks, for a total of 135 hours.

**Study Tips**

Become an active user of the resource materials. Aim for understanding rather than memorization. The more active you are when you study, the more likely you will be to retain, understand, and apply the information.

The following techniques are generally considered to be active learning:

- **preview or survey** each chapter
- **highlight or underline text** you believe is important
- **write questions or comments** in the margins
- **practice re-stating content** in your own words
- **relate what you are reading** to the chapter title, section headings, and other organizing elements of the textbook
- **find ways to engage** your eyes, your ears, and your muscles, as well as your brain, in your studies
- **study with a partner or a small group** (if you are an enrolled student, search for partners on MyExcelsior Community)
- **prepare your review notes** as flashcards or create recordings that you can use while commuting or exercising

When you feel confident that you understand a content area, review what you have learned. Take a second look at the material to evaluate your understanding. If you have a study partner, the two of you can review by explaining the content to each other or writing test questions for each other to answer. Review questions from textbook chapters may be helpful for partner or individual study, as well.

**Using UExcel Practice Exams**

We recommend taking the first form of the practice exam when you begin studying, to see how much you already know. After taking the first practice exam, check your performance on each question and find out why your answer was right or wrong. This feedback will help you improve your knowledge of the subject and identify areas of weakness that you should address before taking the exam. Take the second form of the practice exam after you have finished studying. Analyze your results to identify the areas that you still need to review.

Although there is no guarantee, our research suggests that students who do well on the practice exams are more likely to pass the actual exam than those who do not do well (or do not take advantage of this opportunity).
About Test Preparation Services

Preparation for UExcel® exams and Excelsior College® Examinations, though based on independent study, is supported by Excelsior College with a comprehensive set of exam learning resources and services designed to help you succeed. These learning resources are prepared by Excelsior College so you can be assured that they are current and cover the content you are expected to master for the exams. These resources, and your desire to learn, are usually all that you will need to succeed.

There are test-preparation companies that will offer to help you study for our examinations. Some may imply a relationship with Excelsior College and/or make claims that their products and services are all that you need to prepare for our examinations.

Excelsior College is not affiliated with any test preparation firm and does not endorse the products or services of these companies. No test preparation vendor is authorized to provide admissions counseling or academic advising services, or to collect any payments, on behalf of Excelsior College. Excelsior College does not send authorized representatives to a student’s home nor does it review the materials provided by test preparation companies for content or compatibility with Excelsior College examinations.

To help you become a well-informed consumer, we suggest that before you make any purchase decision regarding study materials provided by organizations other than Excelsior College, you consider the points outlined on our website at www.excelsior.edu/testprep.

Preparing for This Exam

Prior Knowledge

A basic proficiency in computer use and in the office application you will use to help prepare for this examination is assumed.

Using the Content Outline

Each content area in the outline includes (1) the recommended minimum hours of study to devote to that content area and (2) the most important sections of the recommended resources for that area. These annotations are not intended to be comprehensive.

You may need to refer to other chapters in the recommended textbooks. Chapter numbers and titles may differ in other editions.

This content outline contains examples of the types of information you should study. Although these examples are numerous, do not assume that everything on the exam will come from these examples. Conversely, do not expect that every detail you study will appear on the exam. Any exam is only a broad sample of all the questions that could be asked about the subject matter.

Using the Sample Questions and Rationales

Each content guide provides sample questions to illustrate those typically found on the exam. These questions are intended to give you an idea of the level of knowledge expected and the way questions are typically phrased. The sample questions do not sample the entire content of the exam and are not intended to serve as an entire practice test.

Recommended Resources for the Exam in Business Information Systems

The study materials listed below are recommended by Excelsior College as the most appropriate resources to help you study for the examination. For information on ordering from the Excelsior College Bookstore, see page 1 of this guide. You may also find resource materials in college libraries. Public libraries may have some of the textbooks or may be able to obtain them through an interlibrary loan program.

You should allow sufficient time to obtain resources and to study before taking the exam.

Textbooks

This textbook was used by the examination development committee to verify all questions on the exam.

These study materials may be purchased from the Excelsior College Bookstore.

**Additional Resources**
These resources were identified by the examination development committee as a resource to help you gain a deeper understanding of the subject.

Excelsior Online Writing Lab (OWL):
http://owl.excelsior.edu/

Atomic Learning – access through MyExcelsior
Login at www.excelsior.edu
Communication (Topics tab)

**Open Educational Resources**
The Saylor Foundation provides free, high quality courses through online, self-paced, free learning resources.

**Reducing Textbook Costs**
Many students know it is less expensive to buy a used textbook, and buying a previous edition is also an option. The Excelsior College bookstore includes a buyback feature and a used book marketplace, as well as the ability to rent digital versions of textbooks for as long as students need them. Students are encouraged to explore these and the many other opportunities available online to help defray textbook costs.
Content Outline

General Description of the Examination

The UExcel Business Information Systems examination is based on material typically taught in a one-semester, three-credit, introductory course in Business Information Systems. The content of the examination corresponds to course offerings such as Business or Computer Information Systems, Management Information Systems, Introduction to or Fundamentals of Information Systems, Information Systems and Computer Applications, and Introduction to Computing Information Sciences.

The examination measures comprehension and understanding of general principles and concepts of information systems, including application of information systems in business, impact of information systems on organizations, the technology of information systems, the importance of database management, enterprise systems, decision support systems, and knowledge management systems in pursuit of organizational goals and strategies. The exam also covers topics such as the systems development life cycle and the personal and societal impact of information systems.

Those beginning study for this exam should have a basic proficiency in computer use.

Learning Outcomes

Upon successful completion of the examination, the student will be expected to demonstrate the ability to:

1. Explain what an information system is, its applications in business and its impact on organizations.
2. Explain the technology of information systems including hardware, software, networks and data management.
3. Describe the various types of business information systems and their uses in the workplace including electronic commerce, enterprise systems, decision support, and knowledge management.
4. Discuss the components and life cycle of systems development.
5. Describe the impact of computers, networks including the internet, on people and society.
6. Discuss the relationship between business communications and information systems. Explain how business communication principles impact the effective use of computer applications for collaboration in the workplace.
Content Outline

The content outline describes the various areas of the test, similar to the way a syllabus outlines a course. To fully prepare requires self-direction and discipline. Study involves careful reading, reflection, and systematic review.

The major content areas on the Business Information Systems examination, the percent of the examination, and the hours to devote to each content area are listed below.

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Percent of the Examination</th>
<th>Hours of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Introduction to Information Systems</td>
<td>15%</td>
<td>21</td>
</tr>
<tr>
<td>II. The Technology of Information Systems</td>
<td>30%</td>
<td>40</td>
</tr>
<tr>
<td>III. Business Information Systems</td>
<td>30%</td>
<td>40</td>
</tr>
<tr>
<td>IV. Systems Development</td>
<td>15%</td>
<td>21</td>
</tr>
<tr>
<td>V. Personal/Social Impact of Computers</td>
<td>10%</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Occasionally, examples will be listed for a content topic to help clarify that topic. However, the content of the examination is not limited to the specific examples given.

I. Introduction to Information Systems

15 PERCENT OF EXAM | 21 HOURS OF STUDY

Stair & Reynolds (8th ed., 2016)  
Chapter 1

A. What is an Information System?
   1. Data vs. information (“Raw materials vs. finished goods”)
   2. Data representation
   3. Characteristics of valuable information
   4. Information processing cycle

5. Components of a computer-based information system
   a. Hardware
   b. Software
   c. Databases
   d. Telecommunications
   e. People
   f. Procedures

B. Applications of Information Systems in Business
   1. Electronic and mobile commerce
   2. Transaction processing
   3. Business intelligence
   4. Emerging trends

C. Impact of information systems on organizations
   1. Systems development process
      a. Organizations
      b. Competitive advantage
c. Financial aspects
2. IT roles and responsibilities
3. Global issues in information systems

II. The Technology of Information Systems

30 PERCENT OF EXAM | 40 HOURS OF STUDY

Chapters 2, 3, and 4

A. Hardware
1. Processing and memory devices
   a. CPU and memory components
   b. Multiprocessing, parallel computing, grid computing
2. Storage devices
   a. Access methods
   b. Types
3. Input and output devices
   a. Input
   b. Output
4. System types
   a. Mobile
   b. Stationary
   c. Multi-user

B. Software
1. Programs
   a. Overview
   b. Issues and trends
2. Systems
   a. Operating system
      1) Attributes
      2) Current operating systems
   b. Utility and middleware
3. Applications
   a. Proprietary vs. off-the-shelf
   b. Application Service Provider/Software as a Service
   c. Personal and mobile
   d. Workgroup and enterprise

C. Managing data
1. Data hierarchy
2. Data modeling
3. Databases
   a. Types
   b. Characteristics
   c. Administration
4. Applications of databases
   a. Big data, warehouses, marts, and mining
   b. Other

D. Networking and the internet
1. Wireless
2. Wired
3. Types of networks
4. Hardware and software
5. The internet
   a. Use and history
   b. How it works
   c. Cloud computing
6. The World Wide Web
7. Internet and web applications
   a. Social media, email, collaboration tools
   b. Online information and search
   c. Instant messaging, conferencing, logging, & podcasting
   d. Entertainment, streaming music and movies
   e. Shopping, travel, geolocation, and navigation
8. Intranets and extranets

E. Virtualization
1. Introduction and history
2. How it works
3. Benefits and use in business
III. Business Information Systems

30 PERCENT OF EXAM | 40 HOURS OF STUDY

Chapters 5, 6, and 7

A. Commerce - Electronic/Mobile
   1. Types of Electronic & Mobile Commerce
   2. Applications
      a. Retail/wholesale/bartering
      b. Manufacturing
      c. Marketing/advertising
      d. Banking/investment/finance
   3. Infrastructure

B. Enterprise Systems
   1. Transaction processing
      a. Types
      b. Activities
      c. Applications
   2. Enterprise resource planning
      a. Overview/advantages/challenges
      b. Types
         1) Supply chain management
         2) Accounting
         3) Customer relationship management
         4) Lifecycle management
   3. Infrastructure

C. Information and Decision Support Systems
   1. Decision making process
   2. Management information systems
      a. Overview
      b. Financial
      c. Manufacturing
      d. Marketing
      e. Human resources
      f. Other
   3. Decision systems
      a. Decision support systems
      b. Group support systems

D. Knowledge Management and Specialized Information Systems
   1. Knowledge management systems
      a. Overview
      b. People and process
      c. Technology
   2. Artificial intelligence
      a. Overview
      b. Expert systems
      c. Other types
   4. Multimedia
   5. Virtual reality
   6. Other systems

IV. Systems Development

15 PERCENT OF EXAM | 21 HOURS OF STUDY

Chapter 8

A. Systems Development Components
   1. Project goals and participants
      a. Aligning goals
      b. Stakeholders and users
      c. Systems developers
   2. Approaches
      a. Traditional
      b. Other development techniques
   3. Success factors
   4. Project management tools

B. Systems Development Lifecycle
   1. Feasibility
   2. Analysis
      a. Requirements
      b. Data
   3. Design
   4. Implementation
      a. Acquisition
b. Preparation and rollout

5. Operations
   a. Operations
   b. Maintenance
   c. Review

V. Personal/Social Impact of Computers

Chapter 9

A. Work environment
   1. Inefficiencies and errors
   2. Privacy

B. Crime
   1. Computer crime
      a. Cyber terrorism
      b. Identity theft
      c. Hacking
      d. Spyware
      e. Information theft
      f. Patents and copyrights
      g. Scams
   2. Recognizing and preventing computer crime
      a. Recovering stolen property, monitoring criminals, assessing crime risk
      b. Corporate security tools
      c. Preventing identity theft, malware, scams
      d. Privacy concerns

C. Ethical issues
The sample questions give you an idea of the level of knowledge expected in the exam and how questions are typically phrased. They are not representative of the entire content of the exam and are not intended to serve as a practice test.

Rationales for the questions can be found on pages 13–15 of this guide. In that section, the correct answer is identified and each answer is explained. The number in parentheses at the beginning of each rationale refers to the corresponding section of the content outline. For any questions you answer incorrectly, return to that section of the content outline for further study.

1. Which term is best defined as a collection of facts organized and processed so that they have value beyond the value of the individual facts?
   1) information
   2) data
   3) technology
   4) numeric

2. Which type of hardware is most closely associated with computation and processing activities?
   1) an automatic scanning device
   2) the keyboard
   3) the main memory
   4) a printer

3. Which section of a computer is part of the central processing unit (CPU)?
   1) disk storage unit
   2) input devices
   3) output devices
   4) arithmetic/logic unit

4. What does the acronym OLED stand for?
   1) original light-emitting diode
   2) organic light-emitting diode
   3) output light-emitting diode
   4) original light-energy diode

5. Which type of software is designed to coordinate the activities and functions of the hardware and various programs throughout the computer system?
   1) application software
   2) system software
   3) rich Internet application software
   4) personal productivity software

6. Which technology runs cables from a carrier’s exchange all the way to a point-of-sale terminal, to allow customers to pay for their purchases?
   1) Bluetooth
   2) ultra wide band (UWB)
   3) near field communications (NFC)
   4) fiber optic communications service (FiOS)
7. Which transmission medium is the best to use when wiring a company's physical network infrastructure, if low cost and the need to use a common technology are the main selection criteria?
   1) thicknet
   2) coaxial cable
   3) fiber-optic cable
   4) twisted pair

8. Which network communications convention enables network traffic to be routed among all the networks connected to the Internet?
   1) Internet Protocol (IP)
   2) internet service provider (ISP)
   3) uniform resource locator (URL)
   4) fiber optic communications service (FiOS)

9. An Internet-based sales company regularly keeps track of those parts of its Web site that are most frequently visited. What type of analysis is best suited to discern the usage pattern of visitors to these parts of this company's website?
   1) clickstream analysis
   2) clickthrough analysis
   3) cookie analysis
   4) discovery-driven analysis

10. Within an organization what is the intended functionally of Transaction Processing Systems?
    1) To support managerial decision making by utilizing data provided by a Decision Support System
    2) To immediately track each transaction on-line without the delays of accumulating transactions
    3) To accumulate a specific type of business transaction overtime for eventual processing as a single unit or batch
    4) To capture and process the detailed data necessary to update records pertaining to the fundamental business operations of the organization

11. Of the following types of reports produced by a management information system (MIS), which type of report provides increasingly detailed data about a given situation?
    1) Key indicator report
    2) Demand report
    3) Exception report
    4) Drill down report

12. Which inventory management approach maintains inventory at its lowest possible level without sacrificing the availability of the finished product?
    1) Material requirements planning inventory
    2) Just-in-time (JIT) inventory
    3) Economic order quantity inventory
    4) Flexible manufacturing system inventory

13. Which decision-making approach consists of members spontaneously offering original ideas and fostering of creativity?
    1) Nominal group
    2) Brainstorming
    3) Group consensus
    4) Benchmarking

14. What is a Turing Test?
    1) A statistical test within an inventory control MIS to determine if the EOQ (Economic Order Quantity) has been calculated correctly
    2) A judgmental test to determine if a Decision Support System has produced decisions that are comparable to that of a human decision-maker
    3) A test which attempts to determine if a computer programmed for intelligent behavior can, when interrogated, produce responses which are indistinguishable from those of a human being
    4) A logical test to determine if a Supply Chain Management (SCM) system is learning from its past experience
15. An expert system that plays chess is designed to pick a move, to analyze all the possible results of that move, then to pick another move and analyze those results. When it can no longer find a better move, the expert system moves the chess piece. This is an example of what type of expert system?
   1) reinforcement programming
   2) a robotic system
   3) a dynamic programming system
   4) a natural language processing system

16. Radio Frequency Identification (RFID) tags are used for which of the following actions?
   (Select the 3 that apply.)
   1) processing credit card payments
   2) paying for gas at a pump
   3) using an automatic device in a vehicle to pay for a road toll
   4) tracking and locating items in warehouses
   5) tracking calculation errors in income tax returns

17. In a data flow diagram, which symbol is used to show either the source or destination of the data element?
   1) data flow
   2) process
   3) entity
   4) data store

18. If an end user has a problem with a system while it is in operation, whom should end users contact when a problem is discovered?
   1) systems developers
   2) systems analysts
   3) help desk
   4) the chief information officer (CIO)

19. For most organizations, which aspect of the Systems Development Lifecycle requires the largest expenditures?
   1) analysis
   2) design
   3) implementation
   4) maintenance

20. What has occurred when a student gains access to a school’s grading system and modifies their grade from a D to a B?
   1) cyberterrorism
   2) placement of spyware
   3) identity theft
   4) hacking
Rationales

1.  
  1) Information is a collection of facts organized and processed so that they have value beyond the value of the individual facts.  
  2) Data consists of raw facts, and real-world things.  
  3) Technology can be the means of gathering such data, but is not data itself.  
  4) The data is not numeric, it’s alpha-numeric.

2.  
  1) An automatic scanning device is an input device.  
  2) The keyboard is an example of input device.  
  *3) Processing devices include computer chips that contain the central processing unit and main memory.  
  4) A printer is an output device.

3.  
  1) Disk storage is not part of the CPU.  
  2) Input devices are separate from the CPU.  
  3) Output devices are separate from the CPU.  
  *4) The arithmetic/logic unit is an integral part of the CPU.

4.  
  1) See 2).  
  *2) OLED = organic light-emitting diode  
  3) See 2).  
  4) See 2).

5.  
  1) Application software consists of programs that help users solve particular computing problems.  
  *2) System software is the set of programs designed to coordinate the activities and functions of the hardware and various programs throughout the computer system.  
  3) Rich Internet application software is an application software that is available on the Web.  
  4) Personal productivity software is software designed to increase the personal effectiveness of the user. This is similar to application software.

6.  
  1) Bluetooth is a wireless communications specification.  
  2) This is ultra wide band used to connect different devices together.  
  3) NFC technology allows for credit cards to be near point of sale terminals.  
  *4) This is a bundled set of communications service on fiber optic cable.

*correct answer
7.  
1) Thicknet is a type of coaxial cable. It is not as common or as inexpensive as some of the alternatives.  
2) Coaxial cable is common between an ISP and business/consumer but it is not common for the network infrastructure of an organization. It is also not the least expensive alternative.  
3) Fiber optic cable is not common and it is not inexpensive.  
*4) Twisted pair is extremely common and is relatively inexpensive.

8.  
*1) IP is the Internet Protocol.  
2) ISP is an Internet service provider.  
3) URL is an address for the exact location of a Web page.  
4) FiOS is a communications service.

9.  
*1) Clickstream analysis is correct. Clickstream analysis is used to analyze the streams of clicks a visitor makes on a particular website to discern website usage behavior.  
2) Clickthrough analysis is an analysis of clickthrough rate for assessing success of an online advertising campaign for a particular website.  
3) Cookie analysis is done to identify a user on his/her repeat visit to a website.  
4) Discovery driven analysis is a data mining technique used to create a profile based on patterns in the data and not to discern website usage pattern.

10.  
1) The reverse is true. A TPS provides some of the data for a DSS.  
2) This defines OLTP (Online Transaction Processing). Not all Transaction Processing Systems are designed to be online, and some could run in a batch processing mode.  
3) This defines a Batch Processing System.  
*4) A TPS captures and processes the detailed data necessary to update records pertaining to the fundamental business operations of the organization.

11.  
1) A key indicator report summarizes the previous day's activities.  
2) A demand report is specifically requested by an individual or group.  
3) An exception report is produced when a situation is unusual or requires management attention.  
*4) A drill down report provides increasingly detailed data about a given situation.

12.  
1) MRP deals with inventory control when the demand for one item depends on the demand for another item.  
*2) JIT maintains inventory at its lowest possible level without sacrificing the availability of the finished product.  
3) EOQ is a mathematical calculation to determine the quantity ordered, which minimizes total inventory cost.  
4) A flexible manufacturing system represents an approach whereby a manufacturing facility may rapidly and efficiently change from the manufacture of one product to another.

13.  
1) A nominal group technique encourage feedback, with the final decision being voted upon. It is a more methodological approach.  
*2) Brainstorming consists of members offering ideas “off the top of their heads,” fostering creativity and original thinking in decision making.  
3) A group consensus approach forces a group to make a unanimous decision  
4) Benchmarking approach allows a company to compare its own practices to those of other “leading” companies.
14.  
1) A Turing Test has nothing to do with inventory control.  
2) A Turing Test has nothing to do with DSS.  
*3) A Turing Test is a test of Artificial Intelligence.  
4) A Turing Test has nothing to do with Supply Chain Management.  

15.  
1) Reinforcement programming makes sequential decisions and learns between each decision.  
2) Robots are mechanical devices that perform tasks.  
*3) A dynamic programming is a learning system that decides, analyzes and decides again until no better solution can be found.  
4) A natural language processing system allows computers to understand and react to human statements.  

16.  
1) They are not used to process credit card payments  
*2) They are used at gas stations to make payments at the pump  
*3) They are used in vehicles for automatic road toll payment  
*4) They are used to track and locate items in warehouses  
5) They are not used to track calculation errors in income tax returns  

17.  
1) A data flow symbol is a line that shows direction of movement.  
2) A process symbol is the representation of a process that is performed.  
*3) An entity symbol shows either the source or destination of the data element.  
4) A data store symbol indicates a storage location for data.  

18.  
1) While systems developers may be able to solve a particular problem, they should not be contacted directly.  
2) Systems analysts may replicate the problem and find potential solutions, but end users shouldn’t contact them directly.  
*3) A help desk consists of computer systems, manuals, people with technical expertise, and other resources needed to solve problems and give accurate answers to questions. End users should contact the help desk when problems arise.  
4) The chief information officer (CIO) is responsible for the strategic vision of information systems in an organization and rarely will interact with end users having a problem with a particular system.  

19.  
1) See 4).  
2) See 4).  
3) See 4).  
*4) Maintenance of legacy systems includes changes and enhancements to make it meet changing business goals. For many organizations this makes up the largest percentage of the I/T budget.  

20.  
1) Cyberterrorism is a politically motivated attack on information systems.  
2) Spyware is software installed on a personal computer to examine a users actions.  
3) Identity theft occurs when someone steals personal information (eg., a SSN) and uses it to impersonate someone else.  
*4) Hacking is the correct answer, and involves breaking into computer systems.  

*correct answer
SECTION FIVE

Taking the Exam

Registering for Your Exam

Register Online

www.excelsior.edu/examregistration
Follow the instructions and pay by Visa, MasterCard, American Express, or Discover Card.

Examination Administration

Pearson Testing Centers serve as the administrator for all Excelsior College computer-delivered exams. The Disability Services office at Excelsior College is responsible for considering requests for reasonable accommodations (exceptions for individual students with documented disabilities). If you are requesting an accommodation due to a disability, download and complete a Request for Accommodation form that can be accessed by visiting the Excelsior College website at www.excelsior.edu/disability-services.

Computer-Delivered Testing

You will take the exam by computer, entering your answers using either the keyboard or the mouse. The system is designed to be as user-friendly as possible, even for those with little or no computer experience. On-screen instructions are similar to those you would see in a paper examination booklet.

We strongly encourage you to use the online tutorial before taking your exam at a Pearson Testing Center. To access the tutorial, go to www.pearsonvue.com/uexcel and click on the Pearson VUE Tutorial link on the right hand side of the page.

On the Day of Your Exam

Important Reminders

On the day of your exam, remember to:

• dress comfortably: the computer will not mind that you’re wearing your favorite relaxation outfit

• arrive at the test site rested and prepared to concentrate for an extended period

• allow sufficient time to travel, park, and locate the test center

• be prepared for possible variations in temperature at the test center due to weather changes or energy conservation measures

• bring your ID, but otherwise, don’t weigh yourself down with belongings that will have to be kept in a locker during the test.

Academic Honesty

Nondisclosure Statement

• All test takers must agree to the terms of the Excelsior College Academic Honesty Policy before taking an examination. The agreement will be presented on screen at the Pearson VUE Testing Center before the start of your exam.

• Once the test taker agrees to the terms of the Academic Honesty Nondisclosure Statement, the exam will begin.

If you choose not to accept the terms of the agreement

• your exam will be terminated

• you will be required to leave the testing center
you will not be eligible for a refund. For more information, review the Student Policy Handbook at www.excelsior.edu/studentpolicyhandbook.

Student behavior is monitored during and after the exam. Electronic measures are used to monitor the security of test items and scan for illegal use of intellectual property. This monitoring includes surveillance of Internet chat rooms, websites, and other public forums.

Information About UExcel Exams for Colleges and Universities

A committee of teaching faculty and practicing professionals determines the learning outcomes to be tested on each exam. Excelsior College Center for Educational Measurement staff oversee the technical aspects of test construction in accordance with current professional standards. To promote fairness in testing, we take special care to ensure that the language used in the exams and related materials is consistent, professional, and user friendly. Editorial staff perform systematic quantitative and qualitative reviews to ensure accuracy, clarity, and compliance with conventions of bias-free language usage.

Excelsior College, the test developer, recommends granting three (3) semester hours of lower-level undergraduate credit to students who receive a letter grade of C or higher on this examination. This recommendation is endorsed by the American Council on Education. Other colleges and universities also recognize this exam as a basis for granting credit or advanced standing. Individual institutions set their own policies for the amount of credit awarded and the minimum acceptable score.

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