MANAGEMENT INFORMATION SYSTEMS

EXAM INFORMATION

This exam was developed to enable schools to award credit to students for knowledge equivalent to that learned by students taking the course. The exam tests the knowledge of telecommunications; network security; systems analysis and design; business decision making; knowledge management; data warehousing; and data mining.

The exam contains 100 questions to be answered in 2 hours.

Form Codes: SS551, ST551, SY551, SZ551

CREDIT RECOMMENDATIONS

The American Council on Education's College Credit Recommendation Service (ACE CREDIT) has evaluated the DSST test development process and content of this exam. It has made the following recommendations:

Area or Course Equivalent: Principles of Management Information Systems
Level: Lower-level baccalaureate
Amount of Credit: 3 Semester Hours
Minimum Score: 400
Source: www.acenet.edu

EXAM CONTENT OUTLINE

The following is an outline of the content areas covered in the examination. The approximate percentage of the examination devoted to each content area is also noted.

I. Computer Hardware – 10%
- a. History and trends
- b. Terminology
- c. System components (e.g. CPU, RAM, ROM)
- d. Hardware devices (e.g. I/O peripherals: mouse, keyboard; printer; usb drive)
- e. Classification (e.g. computer, tablet, mobile technology, wearable technology)

II. Computer Software – 10%
- a. History of computer software (e.g. MS DOS)
- b. Programming and coding (e.g. HTML, Java)
- c. Terminology
- d. Types of software (e.g. operating systems, applications, utilities)

III. Telecommunications and Networks – 10%
- a. Terminology
- b. Strategic importance to the enterprise (e.g. LAN/WAN, internet connectivity)
- c. Components of telecommunications and networks (e.g. internet, intranet, Cloud, wireless, Virtual, VPN)
- d. Information systems security
- e. Topology and protocols

IV. Business Information Systems – 10%
- a. Electronic commerce (e.g. digital marketing, e-business, B2B, B2C, etc.)
- b. Types/Categories of information systems (e.g. TPS, MIS, DSS, expert systems, AI, ERP, Customer Relationship Management, etc.)

V. Systems Analysis and Design – 10%
- a. Characteristics of a system
- b. Systems architecture
- c. Systems development life cycle (SDLC)

VI. Managing Data Resources – 12%
- a. Data models (e.g. entity relationships, types, attributes)
- b. Database management systems
- c. Data query and update

VII. Business Decision Making – 14%
- a. Knowledge management
- b. Data warehousing (i.e. Big data)
- c. Data mining (e.g. data analytics, business intelligence)

VIII. Project Management– 10%
- a. Approaches (e.g. Waterfall, Predictive, Agile, KANBAN/SCRUM)
- b. Tools (e.g. GANTT, PERT, SAFe)
- c. Terminology (e.g. critical path, Six Sigma, work breakdown structure, Swim lanes, triple constraint)
- d. Benefits

IX. MIS and the Enterprise – 14%
- a. MIS hierarchy (levels and functions)
- b. MIS role in the enterprise
- c. Importance of MIS (e.g. solutions, strategy, competitive advantage)
- d. MIS Issues (e.g. security, ethical/legal/social, privacy, global issues)

REFERENCES

Below is a list of reference publications that were either used as a reference to create the exam, or were used as textbooks in college courses of the same or similar title at the time the test was developed. You may reference either the current edition of these titles or textbooks currently used at a local college or university for the same class title. It is recommended that you reference more than one textbook on the topics outlined in this fact sheet.

You should begin by checking textbook content against the content outline provided before selecting textbooks that cover the test content from which to study.

Sources for study material are suggested but not limited to the following:

1. *MIS, 11th* Edition, 2024, Hossein Bidgoli, Cengage Learning

2. *Management Information Systems: Managing the Digital Firm, 17th* Edition, 2022, Kenneth C. Laudon; Jane P. Laudon, Pearson.

3. *Systems Analysis and Design,* 12th Edition, 2020, Tilley Scott, Cengage Learning

4. *Management Information Systems: Moving Business Forward, EMEA Edition*, 4th Edition, 2019, R. Kelly Rainer; Brad Prince; Hugh J. Watson, John Wiley & Sons UK

SAMPLE QUESTIONS

All test questions are in a multiple-choice format, with one correct answer and three incorrect options. The following are samples of the types of questions that may appear on the exam.

1. A computer-based information system consists of which of the following elements?
   a. Computers, keyboards, display monitors, hard disks, and printers
   b. People, procedures, data, programs, and computers
   c. Input, processing, storage, and output
   d. Planning, programming, organizing, and evaluating

2. Which of the following characteristics of a system reflects the fact that all systems are comprised of subsystems?
   a. Synergy
   b. Differentiation
   c. Regulation
   d. Hierarchy

3. The process by which workers develop their own applications, with or without the help of professional MIS staff, is called?
   a. Decentralized computing
   b. Distributed computing
   c. End-user computing
   d. Client/server computing

4. Which of the following terms is used to describe the transmission of data one character at a time?
   a. Synchronous
   b. Asynchronous
   c. Half-duplex
   d. Full-duplex

5. Multiplexors and concentrators are used in telecommunication systems to do which of the following?
   a. Perform high-speed arithmetic operations
   b. Increase utilization of the communication lines
   c. Store and retrieve data
   d. Display data on the monitor

6. Which of the following systems development approaches involves a highly iterative process of building, using, evaluating, and refining?
   a. System development life cycle (SDLC)
   b. Top-down analysis (TDA)
   c. Prototyping
   d. Critical-path analysis

Answers to sample questions:

1-B; 2-D; 3-C; 4- B; 5-B; 6-C