

## TECEP® Test Description for CIS-107-TE

### COMPUTER CONCEPTS AND APPLICATIONS

---

This exam assesses an overview of computers, focusing on historical development; hardware; application software; communications; internet use; how to purchase, install, and maintain a computer; information systems; system analysis and design; programming; careers in the computer field; security, ethics, and privacy issues; and multimedia. (3 credits)

- **Test format:** 100 multiple choice questions (1 point each).
  - **Passing score:** 70%. Your grade will be reported as CR (credit) or NC (no credit).
  - **Time limit:** 2 hours.
- 

### OUTCOMES ASSESSED ON THE TEST

- Identify the differences between application software and system software.
  - Explain the basics of communication networks and databases.
  - Describe the uses of the Internet.
  - Differentiate between system development and program development.
  - Demonstrate basic knowledge of Microsoft Office 2010 applications and Windows 7.
  - Demonstrate understanding of security, privacy, and ethical issues related to information technology.
  - Identify differences between input and output devices.
- 

### TOPICS ON THE TEST AND THEIR APPROXIMATE DISTRIBUTION

The table below indicates the main topics covered by this exam and the approximate percentage of the exam devoted to each main topic. Under the main topic heading is a list of related—but more specific—topics. It is important to review these topics to determine how much prior knowledge you have and/or how much additional study is necessary.



**Essential Concepts (17%)**

**Topic**

Importance of computer literacy; data vs. information; computer components

Evolution of Internet; broadband vs. dial-up; purpose of IP addresses and relationship to domain names

**Application Software and Components of the System Unit (17%)**

**Topic**

Categories of application software; how operating system and utility programs work with application software; widely used application software; learning aids

Styles of system units on desktop computers, notebook computers, mobile devices; processor components; steps in machine cycle; types of memory; how data is represented in computers

**Input, Output, Storage, and Operating Systems and Utility Programs (16%)**

**Topic**

Input and input devices; output and output devices; program vs. command vs. user response; storage devices vs. storage media; network attached storage devices; cloud storage

System software; functions of an operating system; stand-alone vs. embedded operating systems; purpose of utility programs

**Communications and Networks; Data Management (17%)**

**Topic**

Components required for successful communication; advantages of networks; types of networks; purpose of communication software; types of communications devices; physical vs. wireless transmission media

How a database interacts with data and information; character/field/record/file; file maintenance characteristics of a database; file processing approach vs. database approach; how to access Web databases

**Computer Security, Safety, Ethics, and Privacy; Information System Development; Programming Languages and Program Development (17%)**

**Topic**

Computer security risks and types of cybercrime perpetrators; techniques to prevent unauthorized computer access and use; ways software manufacturers protect against software piracy; options for



backing up computer resources; issues surrounding information privacy (electronic profiles, cookies, spyware, adware, spam, phishing, privacy laws, social engineering, employee monitoring, content filtering)
System development; project management, feasibility, assessment, documentation, and data and information gathering techniques
Types of programming languages; ways to develop Web pages; steps in the program development life cycle
<b>Enterprise Computing; Computer Careers and Certification (16%)</b>
<b>Topic</b>
Special information requirements for enterprise-sized organizations; integrated information systems; types of technologies used throughout an enterprise; virtualization, cloud computing, and grid computing
Career opportunities; ways to stay current with changing technology; use of Microsoft Office including Word, Excel, PowerPoint

---

## STUDY MATERIALS

Below is a list of recommended study materials to help prepare you for your exam. Most textbooks in this subject include the topics listed above and will prepare you for the test. If you choose another text, be sure to compare its table of contents against the topic list to make sure all topics are covered.

Title
Morrison, C., & Wells, D. <i>Computer Literacy Basics</i> . Current edition. Boston, MA: Cengage Learning.
Shelly, G. B., & Vermaat, M. E. <i>Discovering Computers, Complete: Your Interactive Guide to the Digital World</i> . Current edition. Boston, MA: Cengage Learning.

---

## SAMPLE QUESTIONS

The questions below are designed to help you study for your TECEP. Answering these questions does not guarantee a passing score on your exam.

Please note that the questions below **will not** appear on your exam.



1. Which of the following is the focus of computer literacy?
  - a. The web
  - b. The search
  - c. The database
  - d. The hardware
  
2. \_\_\_\_\_ computing involves reducing the electricity consumed and environmental waste generated when using a computer.
  - a. Green
  - b. Universal
  - c. Streamlined
  - d. Comprehensive
  
3. The location of a computer that is attached to the Internet is determined by its
  - a. network
  - b. IP address
  - c. URL
  - d. processor
  
4. Which of the following programs would be used by a student to create a report?
  - a. Access
  - b. Oracle
  - c. PageMaker
  - d. Word
  
5. The basic input/output system that contains the computer's startup instructions is known as
  - a. RAM
  - b. CAM
  - c. BIOS
  - d. FIOS
  
6. Together, the four basic operations of a processor (fetching, decoding, executing, and storing) comprise a \_\_\_\_\_ cycle.
  - a. baseline
  - b. machine
  - c. registration
  - d. pipeline
  
7. \_\_\_\_\_ is any data and instructions entered into the memory of a computer.



- a. Processing
  - b. Hovering
  - c. Input
  - d. Information
8. An example of a hardware component that produces video output is a
- a. monitor
  - b. speaker
  - c. microphone
  - d. joystick
9. Storage \_\_\_\_\_ is the physical material on which a computer keeps data, instructions, and information.
- a. media
  - b. device
  - c. command
  - d. function
10. \_\_\_\_\_ software, such as operating systems and utility programs, consists of the programs that control or maintain the operations of a computer and its devices.
- a. System
  - b. Application
  - c. Management
  - d. Program
11. An assault on system security that derives from an intelligent act that is a deliberate attempt to evade security services and violate the security policy of a system is a(n)
- a. risk
  - b. attack
  - c. asset
  - d. vulnerability
12. Masquerade, falsification, and repudiation are threat actions that cause \_\_\_\_\_ threat consequences.
- a. unauthorized disclosure
  - b. disruption
  - c. deception
  - d. usurpation
13. A \_\_\_\_\_ is an organization that produces data to be made available for controlled release, either within the organization or to external users.



- a. client
  - b. data owner
  - c. user
  - d. server
14. A computer \_\_\_\_\_ risk is any event or action that could cause a loss of or damage to computer hardware, software, data, information, or processing capability.
- a. security
  - b. liability
  - c. terrorism
  - d. network
15. Recognition by fingerprint, retina, and face are examples of
- a. physical authentication
  - b. token authentication
  - c. dynamic biometrics
  - d. static biometrics
16. A password \_\_\_\_\_ is a password guessing program.
- a. hash
  - b. biometric
  - c. cracker
  - d. key
17. Computers as \_\_\_\_\_ is a form of crime that focuses on a computer system to acquire information stored on that computer system.
- a. targets
  - b. storage devices
  - c. media
  - d. communication tools
18. The success of cybercriminals, and the relative lack of success of law enforcement, influence the behavior of
- a. cyber thieves
  - b. cybercrime victims
  - c. cybercrime attorneys
  - d. cyber detectives
19. A disaster \_\_\_\_\_ plan is a written plan describing the steps a company would take to restore computer operations in the event of a disaster.



- a. restoration
- b. prevention
- c. recovery
- d. baseline

20. IBM Certified Solutions Expert – Informix is a \_\_\_\_\_ certification that verifies advanced skills of administration of Informix.

- a. spreadsheet
  - b. network
  - c. server
  - d. database
- 



## ANSWERS TO SAMPLE QUESTIONS

- |        |         |         |
|--------|---------|---------|
| 1. (d) | 8. (a)  | 15. (d) |
| 2. (a) | 9. (a)  | 16. (c) |
| 3. (b) | 10. (a) | 17. (a) |
| 4. (d) | 11. (b) | 18. (b) |
| 5. (c) | 12. (c) | 19. (c) |
| 6. (b) | 13. (b) | 20. (d) |
| 7. (c) | 14. (a) |         |

