

Test Bank for Visualizing Technology
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Visualizing Technology, 10e (Geoghan)
Chapter 1 What Is a Computer?

- 1) Alan Turing is known for developing _____.
A) the Analytical Engine
B) punch cards for use in his loom
C) a test that tests a machine's ability to display intelligent behavior
D) programming

Answer: C

Diff: 2

Objective: 1.1 Explain the Functions of a Computer

- 2) _____ consists of these four components: input, processing, storage, and output.
A) The Turing test
B) Bioinformatics
C) The information processing cycle
D) Unicode

Answer: C

Diff: 1

Objective: 1.1 Explain the Functions of a Computer

- 3) Second-generation computers used _____.
A) microprocessors
B) transistors
C) integrated circuits
D) parallel processing

Answer: B

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

- 4) Fourth-generation computers use _____.
A) microprocessors
B) transistors
C) integrated circuits
D) vacuum tubes

Answer: A

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

5) _____ Law predicted that the number of transistors placed on an integrated circuit would double approximately every two years.

- A) Turing's
- B) Babbage's
- C) Moore's
- D) Lovelace's

Answer: C

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

6) The _____ is a complex integrated circuit that enables it to act as the brain of the computer.

- A) IC chip
- B) microprocessor
- C) transistor
- D) vacuum tube

Answer: B

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

7) The _____ is an early computer created in 1951, which was used to predict election results.

- A) UNIVAC
- B) ENIAC
- C) Colossus
- D) Harvard Mark 1

Answer: A

Diff: 3

Objective: 1.2 Describe the Evolution of Computer Hardware

8) The _____ was the first working, digital, general-purpose computer.

- A) UNIVAC
- B) ENIAC
- C) Colossus
- D) Z1

Answer: B

Diff: 3

Objective: 1.2 Describe the Evolution of Computer Hardware

9) Third-generation computers are characterized by the use of _____.

- A) microprocessors
- B) vacuum tubes
- C) transistors
- D) integrated circuits

Answer: D

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

10) What is *not* true about vacuum tubes?

- A) They resemble light bulbs.
- B) They seldom need to be replaced.
- C) They generate a lot of heat when operating.
- D) They were used in first-generation computers.

Answer: B

Diff: 3

Objective: 1.2 Describe the Evolution of Computer Hardware

11) _____ computing refers to the efficient and eco-friendly use of computers.

- A) Grid
- B) Distributed
- C) Ubiquitous
- D) Green

Answer: D

Diff: 1

Objective: 1.2 Describe the Evolution of Computer Hardware

12) A _____ is the smallest unit of digital data.

- A) bit
- B) byte
- C) character
- D) binary code

Answer: A

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

13) A binary code using eight bits has _____ different possible combinations.

- A) 256
- B) 2
- C) 128
- D) 16

Answer: A

Diff: 3

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

14) Eight bits equal _____ byte(s).

- A) 256
- B) 1
- C) 16
- D) 32

Answer: B

Diff: 1

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

15) _____ computers offer the most speed, power, and upgradability for the lowest cost.

- A) Tablet
- B) Desktop
- C) Netbook
- D) All-in-one

Answer: B

Diff: 1

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

16) A(n) _____ is a high-end desktop computer or one that is connected to a network in a business setting.

- A) workstation
- B) two-in-one
- C) netbook
- D) all-in-one

Answer: A

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

17) The Subscriber Identity Module (SIM card) stores all the following information on a mobile device, *except* _____.

- A) apps
- B) cellular carrier
- C) account information
- D) phone identification

Answer: A

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

18) A _____ computer has a screen that can swivel and fold to resemble a tablet.

- A) netbook
- B) client
- C) convertible notebook
- D) subnotebook

Answer: C

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

19) The _____ was first designed to calculate artillery firing tables.

- A) UNIVAC
- B) ENIAC
- C) Colossus
- D) Harvard Mark I

Answer: B

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

20) _____ is the study of the relationship between workers and their workspaces.

- A) Genomics
- B) Ergonomics
- C) Workplace safety
- D) Biometrics

Answer: B

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

21) The _____ is a tracking system created by the U.S. Department of Defense that uses satellites for navigation.

- A) ENIAC
- B) GPS
- C) ASCII
- D) UAS

Answer: B

Diff: 3

Objective: 1.5 Give Examples of Other Computing Devices

22) _____ is an example of a wearable computer.

- A) An Apple Watch
- B) An all-in-one
- C) Google Chrome
- D) Windows Continuum

Answer: A

Diff: 1

Objective: 1.5 Give Examples of Other Computing Devices

23) A(n) _____ is a computer that connects to or requests services from a server.

- A) Analytical Engine
- B) client
- C) Turing machine
- D) smart appliance

Answer: B

Diff: 1

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

24) _____ are very expensive, complex computer systems used in weather forecasting and medical research.

- A) Supercomputers
- B) Enterprise computers
- C) Minicomputers
- D) Mainframe computers

Answer: A

Diff: 1

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

25) Distributed computing distributes _____.

- A) network access among all users
- B) disk storage for all computer users
- C) Internet usage across the entire network
- D) the processing of tasks across a group of computers

Answer: D

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

26) Ubiquitous computing is also called _____.

- A) microcomputing
- B) intelligent computing
- C) invisible computing
- D) embedded computing processes (ECP)

Answer: C

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

27) _____ computers are present in such diverse applications as gasoline pumps, home appliances, and traffic lights.

- A) Embedded
- B) Distributed
- C) Grid
- D) Convertible

Answer: A

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

28) What technology allows computers to think and act more like people?

- A) Bioinformatics
- B) Convergence
- C) Artificial intelligence
- D) Ergonomics

Answer: C

Diff: 3

Objective: 1.1 Explain the Functions of a Computer

29) Smartphones use _____ technology, allowing users to perform several functions with one device.

- A) convergence
- B) grid computing
- C) embedded design
- D) invisible computing

Answer: A

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

30) Which is *not* true about the CPU?

- A) In most computers it runs the network.
- B) It serves as the brain of the computer.
- C) It controls all functions performed by other components.
- D) It processes all the commands it receives.

Answer: A

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

31) 3D images created by laser or another light source are known as _____.

- A) virtual reality
- B) augmented reality
- C) holograms
- D) mixed reality

Answer: C

Diff: 3

Objective: 1.5 Give Examples of Other Computing Devices

32) What is *not* true about laptop computers?

- A) They are considered portable computing devices.
- B) They are the same as notebook computers.
- C) They can rival desktop computers in power and storage capacity.
- D) They are usually less expensive than comparably equipped desktop computers.

Answer: D

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

33) What is *not* an advantage of multiuser computers?

- A) They allow centralized security.
- B) They allow centralized resources.
- C) They are less powerful than personal computers.
- D) They allow multiple users to connect to them.

Answer: C

Diff: 1

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

34) What is *not* true about virtual reality?

- A) It combines the best of the real world with the artificial world.
- B) It consists of images and sounds created by a computer.
- C) It is affected by the actions of the people using it.
- D) It is an artificial world.

Answer: A

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

35) A computer converts raw data into useful information.

Answer: TRUE

Diff: 1

Objective: 1.1 Explain the Functions of a Computer

36) The Analytical Engine was the first mechanical computer that was built.

Answer: FALSE

Diff: 2

Objective: 1.1 Explain the Functions of a Computer

37) Punch cards were developed as part of the Jacquard loom to manufacture textiles containing complex patterns.

Answer: TRUE

Diff: 2

Objective: 1.1 Explain the Functions of a Computer

38) The information processing cycle consists of five stages: input, processing, retrieval, storage, and output.

Answer: FALSE

Diff: 2

Objective: 1.1 Explain the Functions of a Computer

39) First-generation computers used vacuum tubes.

Answer: TRUE

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

40) UNIVAC is considered the first working, digital, general-purpose computer.

Answer: FALSE

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

41) Computers use a base 2 number system and binary codes to carry out commands.

Answer: TRUE

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

42) ASCII is the standard character system on the Internet.

Answer: FALSE

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

43) 256 bits equal one byte.

Answer: FALSE

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

44) Mac computers have a reputation for being secure, stable, and fun.

Answer: TRUE

Diff: 1

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

45) Tablet computers rival desktop computers in power and storage capacity.

Answer: FALSE

Diff: 1

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

46) The main difference between the Mac and the PC is the speed of the microprocessor.

Answer: FALSE

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

47) If you wanted to type in Latin, the ASCII system is what you would need.

Answer: FALSE

Diff: 1

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

48) Computers worn on the body are known as embedded computers.

Answer: FALSE

Diff: 1

Objective: 1.5 Give Examples of Other Computing Devices

49) Distributed computing that uses a group of computers in one location is called grid computing.

Answer: TRUE

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

50) Mainframes are computer systems that perform complex mathematical calculations, such as those used in weather forecasting.

Answer: FALSE

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

51) Through convergence, many separate computerized functions can be performed by one device.

Answer: TRUE

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

52) Embedded computers are found in everyday devices such as dishwashers, gasoline pumps, and grocery store cash registers.

Answer: TRUE

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

53) Chromebooks are popular in K-12 schools.

Answer: TRUE

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

54) With virtual reality, you can interact with holograms in the real world.

Answer: FALSE

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

55) Mac computers and computers running the Linux operating system are not considered personal computers.

Answer: FALSE

Diff: 1

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

56) A video game system is a computer designed primarily to play games.

Answer: TRUE

Diff: 1

Objective: 1.5 Give Examples of Other Computing Devices

57) Supercomputers are found in businesses that have massive amounts of data or transactions to process.

Answer: FALSE

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

58) Devices that can be monitored and controlled remotely via a web browser or mobile app are a part of the Internet of Things.

Answer: TRUE

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

59) The ability to change its _____ distinguishes a computer from any other machine.

Answer: programming

Diff: 1

Objective: 1.1 Explain the Functions of a Computer

60) Charles Babbage designed a mechanical computer called the _____.

Answer: Analytical Engine

Diff: 2

Objective: 1.1 Explain the Functions of a Computer

61) Mobile _____ are programs that extend the functionality of mobile devices.

Answer: apps, applications

Diff: 1

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

62) The information processing cycle converts raw data into _____.

Answer: information

Diff: 1

Objective: 1.1 Explain the Functions of a Computer

63) The Internet of _____ is the connection of the physical world to the Internet.

Answer: Things

Diff: 3

Objective: 1.7 Explain Ubiquitous Computing and Convergence

64) _____ Law predicts that the number of transistors that could be placed on an integrated circuit doubles about every two years.

Answer: Moore's

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

65) _____ are chips that contain large numbers of transistors.

Answer: Integrated circuits

Diff: 3

Objective: 1.2 Describe the Evolution of Computer Hardware

66) _____ resemble incandescent light bulbs and give off a lot of heat.

Answer: Vacuum tubes

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

67) Digital data, used by a computer, is represented by a(n) _____ code.

Answer: binary

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

68) _____ is a character system using a 7-bit system that was later expanded to an 8-bit system.

Answer: ASCII

Diff: 3

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

69) _____ is the standard character set on the Internet and includes codes for most of the world's written languages.

Answer: Unicode

Diff: 3

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

70) A(n) _____ is a notebook computer that is thin and light, and that has high-end processing and video capabilities.

Answer: subnotebook

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

71) A(n) _____ is a special pen that allows users to write directly on a screen.

Answer: stylus

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

72) _____ computers have an integrated monitor and are used when office space is an issue.

Answer: All-in-one

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

73) _____ is the study of workers and their workplaces.

Answer: Ergonomics

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

74) _____ design principles help accommodate people with disabilities.

Answer: Universal

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

75) GPS stands for _____.

Answer: Global Positioning System

Diff: 3

Objective: 1.5 Give Examples of Other Computing Devices

76) _____ are the basic units of quantum information.

Answer: Qubits, Quantum bits

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

77) A game _____ is a device used to interact with a video game.

Answer: controller

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

78) A hands-free computer used for health monitoring is an example of a(n) _____ computer.

Answer: wearable

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

79) _____ are computers that provide services like Internet access, email, and print services for a group of computers.

Answer: Servers

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

80) Distributed computing that uses a group of computers in one location is called _____ computing.

Answer: grid

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

81) An unmanned aircraft system is also known as a(n) _____.

Answer: drone

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

82) _____ computing is also referred to as invisible computing.

Answer: Ubiquitous

Diff: 3

Objective: 1.7 Explain Ubiquitous Computing and Convergence

83) Using a smartphone to pay an electric bill is an example of _____ technology.

Answer: convergence

Diff: 3

Objective: 1.7 Explain Ubiquitous Computing and Convergence

84) _____ applies information technology to the field of biology.

Answer: Bioinformatics

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

85) In _____ Reality, virtual content is overlaid on the physical world.

Answer: Augmented

Diff: 2

Objective: 1.5 Give Examples of Other Computing Devices

86) The _____ processing unit is considered the brain of the computer.

Answer: central

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

87) The efficient and eco-friendly use of computers and other electronics is called _____ computing.

Answer: green

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

88) If you use your cell phone to pay for an item, rather than cash or credit cards, you are using a(n) _____.

Answer: mobile payment system

Diff: 2

Objective: 1.7 Explain Ubiquitous Computing and Convergence

89) A network for delivering electricity that includes communication technology to manage electricity distribution efficiently is known as a(n) _____.

Answer: smart grid

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

90) _____ homes use home automation to control lighting, heating and cooling, security, entertainment, and appliances.

Answer: Smart

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware

91) _____ computing projects harness the idle processing power of hundreds or thousands of personal computers.

Answer: Volunteer

Diff: 2

Objective: 1.6 List the Various Types and Characteristics of Multiuser Computers

92) Quantum computers use the quantum properties of superposition and _____ to create multiple states.

Answer: entanglement

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

93) A(n) _____ notebook has a detachable screen that converts to a tablet.

Answer: two-in-one

Diff: 2

Objective: 1.4 List the Various Types and Characteristics of Personal Computers

94) Match each of the following terms to its meaning:

- I. bit
- II. byte
- III. base 2
- IV. ASCII
- V. Unicode

- A. represents a single character
- B. smallest unit of digital information
- C. originally 7-bit system to represent characters
- D. standard character set on the Internet
- E. binary number system

Answer: B, A, E, C, D

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

95) Match each of the following decimal values to its prefix:

- I. 1,000
- II. 1,000,000
- III. 1,000,000,000
- IV. 1,000,000,000,000
- IV. 1,000,000,000,000,000

- A. mega
- B. kilo
- C. giga
- D. tera
- E. peta

Answer: B, A, C, D, E

Diff: 2

Objective: 1.3 Describe How Computers Represent Data Using Binary Code

96) Match each of the following terms to its meaning:

- I. artificial intelligence
- II. Turing test
- III. Moore's Law
- IV. Qubits
- V. GPS

- A. branch of science related to making computers behave like humans
- B. use the quantum properties of superposition and entanglement
- C. determines a machine's ability to display intelligent behavior
- D. system used to determine one's location
- E. predicts the growth of integrated circuitry

Answer: A, C, E, B, D

Diff: 3

Objective: Multiple objectives in the chapter

97) Match each of the following terms to its meaning:

- I. server
- II. all-in-one
- III. workstation
- IV. tablet
- V. notebook

- A. portable personal computer
- B. high-end computer attached to a network
- C. a computer that provides Internet, email, or printing services
- D. handheld mobile device
- E. desktop computer with an integrated monitor and system unit

Answer: C, E, B, D, A

Diff: 3

Objective: Multiple objectives in the chapter

98) Match each of the following terms to its meaning:

- I. stylus
- II. ergonomics
- III. wearable computer
- IV. embedded
- V. bioinformatics

- A. digital pen
- B. hands-free device used for health monitoring
- C. application of information technology to the field of biology
- D. type of computer present at gasoline pumps, traffic lights, and supermarket self-checkout lines
- E. study of the relationship between workers and their workspaces

Answer: A, E, B, D, C

Diff: 3

Objective: Multiple objectives in the chapter

99) Match each of the following terms to its meaning:

- I. data
- II. enterprise server
- III. operating system
- IV. ubiquitous computing
- V. unmanned aircraft system

- A. provides user interface to communicate with computer hardware and software
- B. technology in the background
- C. numbers, words, or sounds that represent facts about people, things, or ideas
- D. a drone
- E. also called a mainframe computer

Answer: C, E, A, B, D

Diff: 2

Objective: Multiple objectives in the chapter

100) Match each of the following computer generations to the type of electrical component used:

- I. first-generation
- II. second-generation
- III. third-generation
- IV. fourth-generation

- A. transistors
- B. integrated circuits
- C. microprocessors
- D. vacuum tubes

Answer: D, A, B, C

Diff: 2

Objective: 1.2 Describe the Evolution of Computer Hardware