Fundamentals of Information Systems 8th edition Stair Test Bank

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Chapter 02 Hardware and Software

TRUEFALSE

1. When making hardware decisions, the overriding considerations of a business should be technology cost.

(A) True

(B) False

Answer : (B)

2. Because of the electromechanical processes involved in using primary storage, it is considerably slower than secondary storage.

(A) True

(B) False

Answer : (B)

3. The ability to process (organize and manipulate) data is a small aspect of a computer system.

(A) True

(B) False

Answer : (B)

4. The components responsible for processing-the central processing unit (CPU) and memory-are housed together in the same box or cabinet, called the system unit.

(A) True

(B) False

Answer : (A)

5. The clock speed of a central processing unit (CPU) is independent of machine cycle time.

(A) True

(B) False

Answer : (B)

6. RAM stands for random access memory, a form of memory that holds its contents even if the

current is turned off or disrupted.

(A) True

(B) False

Answer : (B)

7. A multicore microprocessor combines two or more independent processors into a single computer so that they can share the workload and boost processing capacity.

(A) True

(B) False

Answer : (A)

8. Compared to secondary storage, main memory offers the advantages of non-volatility, greater capacity, and greater economy.

(A) True

(B) False

Answer : (B)

9. Disk mirroring is a method of storing data that generates extra bits of data from existing data, allowing the system to create a "reconstruction map" so that if a hard drive fails, it can rebuild lost data.

(A) True

(B) False

Answer : (B)

10. With the redundant array of independent/inexpensive disks (RAID) approach, data can be split and stored on different physical disk drives using a technique called mirroring to evenly distribute the data.

(A) True

(B) False

Answer : (B)

11. The overall trend in secondary storage is toward use of indirect access methods and increased volatility.

(A) True

(B) False

Answer : (B)

12. Optical mark recognition (OMR) is a technology from the 1950s still used to speed up the processing of checks.

(A) True

(B) False

Answer : (B)

13. Organic light-emitting diode (OLED) monitors use less power than light-emitting diode (LED) monitors.

(A) True

(B) False

Answer : (A)

14. As the difference among computer manufacturers in the arenas of price and performance narrows, support for green computing is emerging as a new business strategy for these companies to distinguish themselves from the competition.

(A) True

(B) False

Answer : (A)

15. Application software is a set of programs designed to coordinate the activities and functions of the hardware and various programs throughout the computer system.

(A) True

(B) False

Answer : (B)

16. Information systems that operate within the workgroup sphere of influence support a firm in its interaction with customers, suppliers, shareholders, competitors, special-interest groups, the financial community, and government agencies.

(A) True

(B) False

Answer : (B)

17. To run, applications request services from the operating system through a defined application program interface (API).

(A) True

(B) False

Answer : (A)

18. The operating system controls how memory is accessed and maximizes available memory and storage.

(A) True

(B) False

Answer : (A)

19. An operating system with multiuser capabilities allows two or more users to run programs at the same time on the same computer.

(A) True

(B) False

Answer : (A)

20. Individuals and organizations can use the open-source Linux code to create their own distribution of Linux.

(A) True

(B) False

Answer : (A)

21. Utility programs help to perform maintenance, correct problems, merge and sort sets of data, keep track of computer jobs, and compress files of data.

(A) True

(B) False

Answer : (A)

22. Middleware is software that allows various systems to communicate and exchange data.

(A) True

(B) False

Answer : (A)

23. Application software applies the power of a computer to give individuals, workgroups, and the entire enterprise the ability to solve problems and perform specific tasks.

(A) True

(B) False

Answer : (A)

24. Software as a Service (SaaS) allows businesses to subscribe to Web-delivered application software by paying a monthly service charge or a per use fee.

(A) True

(B) False

Answer : (A)

25. A software suite is a collection of programs packaged together as a bundle and typically includes a word processor, spreadsheet program, graphics program, and more.

(A) True

(B) False

Answer : (A)

26. There are Web-based productivity software suites that require no installation on the computer.

(A) True

(B) False

Answer : (A)

27. Cloud computing refers to the use of computing resources, including software and data storage, on local computers.

(A) True

(B) False

Answer : (B)

28. Today, programmers often use visual and object-oriented languages to write new business applications.

(A) True

(B) False

Answer : (A)

29. Software upgrades vary widely in the benefits that they provide, and what some people call a benefit others might call a drawback.

(A) True

(B) False

Answer : (A)

30. Most software products are free from copyright or licensing provisions and allows copying of software.

(A) True

(B) False

Answer : (B)

MULTICHOICE

31. Which of the following is a primary element of the central processing unit (CPU)?

(A) Blade servers

(B) Motherboards

(C) Storage registers

(D) Data centers

Answer : (C)

32. The _____ is the part of the central processing unit (CPU) that sequentially accesses program instructions, decodes them, and coordinates the flow of data in and out of the arithmetic/logic unit (ALU).

(A) register unit

(B) primary unit

(C) control unit

(D) main memory unit

Answer : (C)

33. A type of memory that loses its contents if the power is turned off is said to be _____.

(A) multicore

(B) arbitrary

(C) assessable

(D) volatile

Answer : (D)

34. _____ is the use of a collection of computers, often owned by many people or different organizations, to work in a coordinated manner to solve a common problem.

(A) Cloud computing

(B) Grid computing

(C) Parallel computing

(D) Utility computing

Answer : (B)

35. _____ is a storage technology for less frequently needed data so that it appears to be stored entirely on tape cartridges, although some parts may be stored on faster hard disks.

(A) Virtual tape

(B) Compact disc

(C) Magnetic tape

(D) Cache memory

Answer : (A)

36. The Holographic Versatile Disc (HVD) is an advanced _____ technology still in the development stage and is the same size and shape as a regular digital video disc (DVD) but can hold 1 terabyte (or more) of information.

(A) virtual tape

(B) magnetic disc

(C) fiber optics

(D) optical disc

Answer : (D)

37. _____ are used in standardized tests, including the SAT and GMAT tests, and to record votes in elections.

(A) Magnetic Ink Character Recognition (MICR) devices

(B) Optical character recognition (OCR) systems

(C) Optical mark recognition (OMR) systems

(D) Speech recognition devices

Answer : (C)

38. _____ is a technology that employs a microchip with an antenna to broadcast its unique identifier and location to receivers.

(A) Point-of-sale device

(B) Motion-sensing input device

(C) Magnetic Ink Character Recognition

(D) Radio frequency identification

Answer : (D)

39. Which of the following types of flat-panel displays uses electricity to excite gas atoms to light up appropriate phosphors on the screen to emit light and color?

(A) Quantum

(B) Plasma

(C) Light-emitting diode (LED)

(D) Liquid crystal display (LCD)

Answer : (B)

40. A _____ contains an embedded chip that only needs to be held close to a terminal to transfer its

data; no PIN number needs to be entered.

(A) smart card

(B) chip-and-PIN card

(C) contactless payment card

(D) magnetic stripe card

Answer : (C)

41. A _____ is a single user, nonportable computer designed to perform engineering, computer-assisted design (CAD), and heavy mathematical computing.

(A) workstation

(B) netbook

(C) register

(D) notebook

Answer : (A)

42. _____ are the most powerful computers with the fastest processing speed and highest performance.

(A) Blade servers

(B) Workstations

(C) Mainframe computers

(D) Supercomputers

Answer : (D)

43. _____ is concerned with the efficient and environmentally responsible design, manufacture, operation, and disposal of IS-related products, including all types of computers, printers, and printer materials such as cartridges and toner.

(A) Recyclable computing

(B) Sustainable computing

(C) Renewable computing

(D) Green computing

Answer : (D)

44. _____ is a Web-delivered software application that combines hardware resources of the Web server and PC to deliver valuable software services through a Web browser interface.

(A) Cloud computing

(B) Grid computing

(C) Rich Internet application

(D) User application

Answer : (C)

45. A _____ displays icons and menus that people use to send commands to a computer system.

(A) command-based user interface

(B) graphical user interface

(C) natural user interface

(D) multitouch interface

Answer : (B)

46. Programmers use _____ to create application software without understanding the inner workings of an operating system as it provides a software-to-software interface, not an end user interface.

(A) graphical user interface

(B) natural user interface

(C) command-based user interface

(D) application program interface

Answer : (D)

47. Operating systems use _____ techniques to increase the amount of processing that can be accomplished in a given amount of time.

(A) task management

(B) file management

(C) user interface

(D) networking capability

Answer : (A)

48. An operating system with _____ capabilities allows a user to run more than one program concurrently.

(A) networking

(B) multitasking

(C) memory management

(D) hardware independence

Answer : (B)

49. _____ is a powerful operating system originally developed by AT&T for use on minicomputers but now runs on workstations, servers, and mainframe computers.

(A) z/OS

(B) Unix

(C) AIX

(D) Linux

Answer : (B)

50. Which of the following statements is true of embedded operating systems?

(A) They represent a small, niche market.

(B) They are used in a narrow range of applications.

(C) They are dedicated to the control of another device.

(D) They mainly determine the functionality of smartphones solely.

Answer : (C)

51. One advantage of proprietary software versus off-the-shelf software is that _____.

(A) the initial cost is lower

(B) the software is likely to meet the basic business needs that are common across organizations

(C) the software is likely to be of high quality because many customer firms have tested the software and helped identify its bugs

(D) the software provides a company a competitive advantage by solving problems in a unique manner

Answer : (D)

52. One of the disadvantages of proprietary software is that:

(A) it is hard to control results even if one is involved in the development of software.

(B) it is difficult to achieve what is required in terms of features and reports.

(C) it does not allow modification of features
that one might need to counteract an initiative by competitors.

(D) it can take a long time and significant resources to develop the required software features.

Answer : (D)

53. Many organizations are turning to _____, a set of integrated programs that manages a company's vital business operations for an entire multisite, global organization.

(A) software suite

(B) workgroup information system software

(C) enterprise resource planning software

(D) cloud computing

Answer : (C)

54. _____ are sets of keywords, symbols, and rules for constructing statements that people can use to communicate instructions to a computer.

(A) Computing languages

(B) Networking languages

(C) Command languages

(D) Programming languages

Answer : (D)

55. A _____ is a defect in a computer program that keeps it from performing as its users expect it to perform.

(A) software bug

(B) glitch

(C) piracy

(D) faulty upgrade

Answer : (A)

SHORTANSWER

56. The _____ unit of the central processing unit (CPU) performs mathematical calculations and makes logical comparisons.**Answer :** arithmetic/logic

57. The _____ holds program instructions and data, is closely associated with the central processing unit (CPU). **Answer :** primary storage
Answer : main memory
Answer : memory

58. _____ are high-speed storage areas used to temporarily hold small units of program instructions and data immediately before, during, and after execution by the central processing unit (CPU).
Answer : Registers

59. Each central processing unit (CPU) produces a series of electronic pulses at a predetermined rate, called the _____, which affects machine cycle time.**Answer :** clock speed

60. _____ means that data must be accessed in the order in which it is stored.**Answer :** Sequential access

61. The software associated with a virtual tape system is sometimes called a(n) _____.**Answer :** virtual tape server

62. A(n) _____ is a set of physical connections (such as cables and printed circuits) that can be shared by multiple hardware components so they can communicate with one another.**Answer :** bus

63. _____ is a data storage model in which a data storage service provider rents space to people and organizations.**Answer :** Storage as a service

64. A(n) _____ is a dot of color on a photo image or a point of light on a display screen.**Answer :** pixel

65. The digital media equivalent of a conventional printed book is called a(n) _____.**Answer :** e-book
Answer : electronic book

66. _____ are portable, lightweight personal computers that can come with or without a keyboard and allow a user to roam the office, home, or factory floor carrying the device like a clipboard.**Answer :** Tablet computers

67. A(n) _____ is an inexpensive desktop computer designed to be smaller and lighter, and consume much less power than a traditional desktop computer.**Answer :** nettop computer

68. The clock speed for personal computers is measured in the range of multiple _____.**Answer :** gigahertz (GHz)
Answer : gigahertz
Answer : GHz

69. _____ describes program functions to help a user operate a computer system.**Answer :** Documentation

70. The scope of the problems and opportunities addressed by a particular organization is called its _____.**Answer :** sphere of influence

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71. A(n) _____ is a climate-and-access-controlled building or a set of buildings that houses the computer hardware that delivers an organization's data and information services.**Answer :** data center

72. _____ allows different threads of a single program to run concurrently. **Answer :** Multithreading

73. Eight bits together form a _____.
Answer : byte

74. _____ is a Linux-based operating system for netbooks and nettops, which are notebooks and desktop PCs primarily used to access Web based information and services such as email, Web browsing, social networks, and Google online applications.**Answer :** Chrome OS

75. _____ is an arrangement that allows Mac users to set up their computer to run both Windows and Mac OS X and select which platform they want to work with when they boot their computer.**Answer :** Dual booting

76. _____ is a mobile operating system from Google frequently found in smartphones.**Answer :** Android

77. _____ systems are usually designed for a specific purpose in a specific device, are usually proprietary or custom-created and owned by the manufacturer. **Answer :** Embedded

78. A(n) _____ uses modular application services to allow users to interact with systems and systems to interact with each other. **Answer :** service-oriented architecture (SOA)
Answer : service-oriented architecture
Answer : SOA

79. _____ is software that is mass produced by software vendors to address needs that are common across business, organizations, or individuals.**Answer :** Off-the-shelf software

80. The simultaneous execution of the same task on multiple processors to obtain results faster is known as _____.**Answer :** parallel computing

ESSAY

81. Briefly explain the three associated elements of a central processing unit (CPU).

Answer :

Each central processing unit (CPU) consists of three associated elements: the arithmetic/logic unit, the control unit, and the register areas. The arithmetic/logic unit (ALU) performs mathematical calculations and makes logical comparisons. The control unit sequentially accesses program instructions, decodes them, and coordinates the flow of data in and out of the ALU, the registers, the primary storage, and even secondary storage and various output devices. Registers are high-speed storage areas used to temporarily hold small units of program instructions and data immediately before, during, and after execution by the CPU.

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82. What is grid computing and how does it work?

Answer :

Grid computing is the use of a collection of computers, often owned by many people or organizations, to work in a coordinated manner to solve a common problem. Key to the success of grid computing is a central server that acts as a grid leader and traffic monitor. This controlling computer divides the computing task into subtasks and assigns the work to computers on the grid that have (at least temporarily) surplus processing power. The central server also monitors the processing, and if a member of the grid fails to complete a subtask, it will restart or reassign the task. When all the tasks are completed, the controlling server combines the results and advances to the next task until the whole job is completed.

83. Identify three advantages of the use of solid state secondary storage devices (SSDs) over magnetic or optical media.

Answer :

Solid state storage devices (SSDs) store data in memory chips rather than magnetic or optical media. The memory chips require less power and provide faster data access than magnetic data storage devices. In addition, SSDs have no moving parts, so they are less fragile than hard disk drives.

84. Explain what is Electronic Product Environmental Assessment Tool (EPEAT).

Answer :

Electronic Product Environmental Assessment Tool (EPEAT) is a system that enables purchasers to evaluate, compare, and select electronic products based on a total of 51 environmental criteria. Products are ranked in EPEAT according to three tiers of environmental performance: bronze, silver, and gold. Individual purchasers as well as corporate purchasers of computers, printers, scanners, and multifunction devices can use the EPEAT Web site (www.epeat.net) to screen manufacturers and models based on environmental attributes.

85. Discuss three disadvantages of using proprietary software.

Answer :

It can take a long time and significant resources to develop the required features. In-house system developers may become hard pressed to provide the required level of ongoing support and maintenance because of pressure to move on to other new projects. The features and performance of software that has yet to be developed presents potential risk.