

Chapter 1: Introduction

Student: _____

1. Computer science focuses on a broad set of interrelated ideas.
True False
2. Informally, a computing agent is like a recipe.
True False
3. An algorithm describes a process that ends with a solution to a problem.
True False
4. Each individual instruction in an algorithm is well defined.
True False
5. An algorithm describes a process that may or may not halt after arriving at a solution to a problem.
True False
6. An algorithm solves a general class of problems.
True False
7. The algorithms that describe information processing can also be represented as information.
True False
8. When using a computer, human users primarily interact with the memory.
True False
9. Information is stored as patterns of bytes (1s and 0s).
True False
10. The part of a computer that is responsible for processing data is the central processing unit (CPU).
True False

11. Magnetic storage media, such as tapes and hard disks, allow bit patterns to be stored as patterns on a magnetic field.
True False
12. A program stored in computer memory must be represented in binary digits, which is also known as ascii code.
True False
13. The most important example of system software is a computer's operating system.
True False
14. An important part of any operating system is its file system, which allows human users to organize their data and programs in permanent storage.
True False
15. A programmer typically starts by writing high-level language statements in a text editor.
True False
16. Ancient mathematicians developed the first algorithms.
True False
17. In the 1930s, the mathematician Blaise Pascal explored the theoretical foundations and limits of algorithms and computation.
True False
18. The first electronic digital computers, sometimes called mainframe computers, consisted of vacuum tubes, wires, and plugs, and filled entire rooms.
True False
19. In the early 1940s, computer scientists realized that a symbolic notation could be used instead of machine code, and the first assembly languages appeared.
True False
20. The development of the transistor in the early 1960s allowed computer engineers to build ever smaller, faster, and less expensive computer hardware components.
True False

21. Moore's Law states that the processing speed and storage capacity of hardware will increase and its cost will decrease by approximately a factor of 3 every 18 months.
True False
22. In the 1960s, batch processing sometimes caused a programmer to wait days for results, including error messages.
True False
23. In 1984, Apple Computer brought forth the Macintosh, the first successful mass-produced personal computer with a graphical user interface.
True False
24. By the mid 1980s, the ARPANET had grown into what we now call the Internet, connecting computers owned by large institutions, small organizations, and individuals all over the world.
True False
25. Steve Jobs wrote the first Web server and Web browser software.
True False
26. Guido van Rossum invented the Python programming language in the early 1990s.
True False
27. In Python, the programmer can force the output of a value by using the cout statement.
True False
28. When executing the print statement, Python first displays the value and then evaluates the expression.
True False
29. When writing Python programs, you should use a .pyt extension.
True False
30. The interpreter reads a Python expression or statement, also called the source code, and verifies that it is well formed.
True False
31. If a Python expression is well formed, the interpreter translates it to an equivalent form in a low-level language called byte code.
True False

32. The sequence of steps that describes a computational processes is called a(n) ____.
- A. program
 - B. computing agent
 - C. pseudocode
 - D. algorithm
33. An algorithm consists of a(n) ____ number of instructions.
- A. finite
 - B. infinite
 - C. predefined
 - D. undefined
34. The action described by the instruction in an algorithm can be performed effectively or be executed by a ____.
- A. computer
 - B. processor
 - C. computing agent
 - D. program
35. In the modern world of computers, information is also commonly referred to as ____.
- A. data
 - B. bits
 - C. input
 - D. records
36. In carrying out the instructions of any algorithm, the computing agent starts with some given information (known as ____).
- A. data
 - B. variables
 - C. input
 - D. output
37. In carrying out the instructions of any algorithm, the computing agent transforms some given information according to well-defined rules, and produces new information, known as ____.
- A. data
 - B. variables
 - C. input
 - D. output

38. ____ consists of the physical devices required to execute algorithms.
- A. Firmware
 - B. Hardware
 - C. I/O
 - D. Processors
39. ____ is the set of algorithms, represented as programs in particular programming languages.
- A. Freeware
 - B. Shareware
 - C. Software
 - D. Dataset
40. In a computer, the ____ devices include a keyboard, a mouse, and a microphone.
- A. memory
 - B. CPU
 - C. input
 - D. output
41. Computers can communicate with the external world through various ____ that connect them to networks and to other devices such as handheld music players and digital cameras.
- A. facilities
 - B. ports
 - C. racks
 - D. slots
42. The primary memory of a computer is also sometimes called internal or ____.
- A. read-only memory (ROM)
 - B. random access memory (RAM)
 - C. flash memory
 - D. associative memory
43. The CPU, which is also sometimes called a ____, consists of electronic switches arranged to perform simple logical, arithmetic, and control operations.
- A. motherboard
 - B. computing agent
 - C. chip
 - D. processor

44. Flash memory sticks are an example of ____ storage media.
- A. semiconductor
 - B. magnetic
 - C. optical
 - D. primary
45. Tapes and hard disks are an example of ____ storage media.
- A. semiconductor
 - B. magnetic
 - C. optical
 - D. primary
46. CDs and DVDs are an example of ____ storage media.
- A. semiconductor
 - B. magnetic
 - C. optical
 - D. primary
47. A ____ takes a set of machine language instructions as input and loads them into the appropriate memory locations.
- A. compiler
 - B. linker
 - C. loader
 - D. interpreter
48. A modern ____ organizes the monitor screen around the metaphor of a desktop, with windows containing icons for folders, files, and applications.
- A. GUI
 - B. CLI
 - C. terminal-based interface
 - D. applications software
49. ____ programming languages resemble English and allow the author to express algorithms in a form that other people can understand.
- A. Assembly
 - B. Interpreted
 - C. Low-level
 - D. High-level

50. Early in the nineteenth century, ____ designed and constructed a machine that automated the process of weaving.
- A. George Boole
 - B. Joseph Jacquard
 - C. Herman Hollerith
 - D. Charles Babbage
51. ____ took the concept of a programmable computer a step further by designing a model of a machine that, conceptually, bore a striking resemblance to a modern general-purpose computer.
- A. George Boole
 - B. Joseph Jacquard
 - C. Herman Hollerith
 - D. Charles Babbage
52. ____ developed a machine that automated data processing for the U.S. Census.
- A. George Boole
 - B. Joseph Jacquard
 - C. Herman Hollerith
 - D. Charles Babbage
53. ____ developed a system of logic which consisted of a pair of values, TRUE and FALSE, and a set of three primitive operations on these values, AND, OR, and NOT.
- A. George Boole
 - B. Joseph Jacquard
 - C. Herman Hollerith
 - D. Charles Babbage
54. ____ was considered ideal for numerical and scientific applications.
- A. COBOL
 - B. Machine code
 - C. LISP
 - D. FORTRAN
55. In its early days, ____ was used primarily for laboratory experiments in an area of research known as artificial intelligence.
- A. COBOL
 - B. Machine code
 - C. LISP
 - D. FORTRAN

56. In science or any other area of enquiry, a(n) _____ allows human beings to reduce complex ideas or entities to simpler ones.
- A. abstraction
 - B. algorithm
 - C. module
 - D. compiler
57. In the early 1980s, a college dropout named Bill Gates and his partner Paul Allen built their own operating system software, which they called _____.
- A. LISP
 - B. Windows
 - C. MS-DOS
 - D. Linux
58. Python is a(n) _____ language.
- A. functional
 - B. assembly
 - C. interpreted
 - D. compiled
59. To quit the Python shell, you can either select the window's close box or press the _____ key combination.
- A. Control+C
 - B. Control+D
 - C. Control+Z
 - D. Control+X
60. In Python, you can write a print statement that includes two or more expressions separated by _____.
- A. periods
 - B. commas
 - C. colons
 - D. semicolons
61. The Python interpreter rejects any statement that does not adhere to the grammar rules, or _____, of the language.
- A. code
 - B. library
 - C. definition
 - D. syntax

Chapter 1: Introduction **Key**

1. TRUE
2. FALSE
3. TRUE
4. TRUE
5. FALSE
6. TRUE
7. TRUE
8. FALSE
9. FALSE
10. TRUE
11. TRUE
12. FALSE
13. TRUE
14. TRUE
15. TRUE
16. TRUE
17. FALSE
18. TRUE
19. FALSE
20. FALSE
21. FALSE
22. TRUE
23. TRUE
24. TRUE
25. FALSE
26. TRUE
27. FALSE
28. FALSE
29. FALSE
30. TRUE

31. TRUE

32. D

33. A

34. C

35. A

36. C

37. D

38. B

39. C

40. C

41. B

42. B

43. D

44. A

45. B

46. C

47. C

48. A

49. D

50. B

51. D

52. C

53. A

54. D

55. C

56. A

57. C

58. C

59. B

60. B

61. D