

*Test Bank for Python Programming for  
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**Chapter 1 Introduction**

1. Computer science focuses on a broad set of interrelated ideas.

- a. True
- b. False

**ANSWER: True**

2. Informally, a computing agent is like a recipe.

- a. True
- b. False

**ANSWER: False**

3. An algorithm describes a process that ends with a solution to a problem.

- a. True
- b. False

**ANSWER: True**

4. Each individual instruction in an algorithm is well-defined.

- a. True
- b. False

**ANSWER: False**

5. An algorithm describes a process that may or may not halt after arriving at a solution to a problem.

- a. True
- b. False

**ANSWER: False**

6. An algorithm solves a general class of problems.

- a. True
- b. False

**ANSWER: True**

7. The algorithms that describe information processing can also be represented as information.

- a. True
- b. False

**ANSWER: True**

8. When using a computer, human users primarily interact with the memory.

- a. True
- b. False

**ANSWER: False**

9. In computer memory, information is stored as patterns of bytes (1s and 0s).

- a. True
- b. False

**ANSWER: False**

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10. The part of a computer that is responsible for processing data is the central processing unit (CPU).

- a. True
- b. False

**ANSWER: True**

11. Magnetic storage media, such as tapes and hard disks, allow bit patterns to be stored as patterns on a magnetic field.

- a. True
- b. False

**ANSWER: True**

12. A program stored in computer memory must be represented in binary digits, which is also known as ASCII code.

- a. True
- b. False

**ANSWER: False**

13. The most important example of system software is a computer's operating system.

- a. True
- b. False

**ANSWER: True**

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.

- a. True
- b. False

**ANSWER: True**

15. A programmer typically starts by writing high-level language statements in a text editor.

- a. True
- b. False

**ANSWER: True**

16. Ancient mathematicians developed the first algorithms.

- a. True
- b. False

**ANSWER: True**

17. In the 1930s, the mathematician Blaise Pascal explored the theoretical foundations and limits of algorithms and computation.

- a. True
- b. False

**ANSWER: False**

18. The people known as “computers” working on cryptanalysis and ballistics calculations during World War II were primarily men highly skilled in mathematics and puzzle solving.

- a. True

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b. False

**ANSWER: False**

19. The first electronic digital computers, sometimes called mainframe computers, consisted of vacuum tubes, wires, and plugs, and filled entire rooms.

a. True

b. False

**ANSWER: True**

20. In the early 1940s, computer scientists realized that a symbolic notation could be used instead of machine code, and the first assembly languages appeared.

a. True

b. False

**ANSWER: False**

21. The development of the transistor in the early 1960s allowed computer engineers to build ever smaller, faster, and less expensive computer hardware components.

a. True

b. False

**ANSWER: False**

22. 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.

a. True

b. False

**ANSWER: False**

23. Gordon Moore coined the term *software engineering*.

a. True

b. False

**ANSWER: False**

24. In the 1960s, batch processing sometimes caused a programmer to wait days for results, including error messages.

a. True

b. False

**ANSWER: True**

25. In 1984, Apple Computer brought forth the Macintosh, the first successful mass-produced personal computer with a graphical user interface.

a. True

b. False

**ANSWER: True**

26. 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.

a. True

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b. False

**ANSWER:** True

27. In Python, the programmer can force the output of a value by using the `cout` statement.

a. True

b. False

**ANSWER:** False

28. How is data stored within a computer's memory?

a. It is stored as hexadecimal data.

b. It is stored as octal data.

c. It is stored as binary data.

d. It is stored in plain text data.

**ANSWER:** c

29. In a computer, what component is known as the "processor"?

a. RAM

b. CPU

c. basic input/output devices

d. motherboard

**ANSWER:** b

30. A flash memory stick is an example of what type of storage media?

a. magnetic storage media

b. optical storage media

c. electrical storage media

d. semiconductor storage media

**ANSWER:** d

31. What program is used by a programmer to convert high-level code into executable code?

a. translator

b. run-time system

c. interpreter

d. text editor

**ANSWER:** a

32. What problem was the Atanasoff-Berry Computer designed to solve?

a. the automatic creation of ballistics tables for the U.S. military

b. the interpretation of coded transmissions used by Germany in WWII

c. the solving of systems of simultaneous linear equations

d. the calculation of maritime navigation routes for the U.S. Navy

**ANSWER:** c

33. Who is credited as having created the World Wide Web in 1992?

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- a. Steve Jobs
- b. Albert Gore
- c. Tim Berners-Lee
- d. Paul Allen

**ANSWER:** c

34. Which term refers to the modern technology in which practically any physical objects containing the appropriate computer chips can send and receive digital information?

- a. ARPANET
- b. digital cloud
- c. virtual reality
- d. Internet of Things

**ANSWER:** d

35. What kind of programming language is Python?

- a. an interpreted language
- b. a compiled language
- c. an interpolated language
- d. a manufactured language

**ANSWER:** a

36. What is the name used for the integrated program development environment that comes with a Python installation?

- a. Eclipse
- b. IDLE
- c. PyShell
- d. PyDDL

**ANSWER:** b

37. Suppose you are viewing a screen displaying an active IDLE session. What does green text mean?

- a. The text is the result of output or is the name of a function.
- b. The text represents a string.
- c. The text is a built-in function name.
- d. The text indicates a variable's name.

**ANSWER:** b

38. What built-in function should you use in Python to prompt a user for data input?

- a. input
- b. cin
- c. prompt
- d. get

**ANSWER:** a

39. What would be the output if you were to print the variable named value as declared by this statement: `value = "2" + "2"`?

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- a. the number 4
- b. the floating-point value 4.0
- c. the string "22" (without the quotation marks)
- d. a type error, as integers cannot be concatenated

**ANSWER:** c

40. When a Python interpreter runs a script, what is the script translated into?
- a. assembly code
  - b. byte code
  - c. interpolated language code
  - d. ELF-formatted binary

**ANSWER:** b

41. What component of Python is responsible for the execution of Python byte code?
- a. IDLE
  - b. Python interpreter
  - c. Python virtual machine (PVM)
  - d. Python Script Engine (PSE)

**ANSWER:** c

42. At what point in the interpretation of a Python program are syntax error messages generated?
- a. after the conversion of the code into byte code
  - b. before execution of the program, when it is passed through the translator
  - c. during execution of the program by the Python virtual machine
  - d. after user input defined by the program is collected

**ANSWER:** b

43. When IDLE is used for Python programming, what color is used to distinguish built-in function names?
- a. blue
  - b. green
  - c. purple
  - d. red

**ANSWER:** c

44. What language, created by Tim Berners-Lee, allows browsers to structure the information that is to be displayed on web pages?
- a. Python
  - b. HTML
  - c. HTTP
  - d. Java

**ANSWER:** b

45. What processor was contained in the first mass-produced personal computer?
- a. Intel 8080

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- b. AMD486
- c. NEC V20
- d. Motorola 88000

**ANSWER: a**

46. What type of processing occurs when processes run for a slice of time, then yield access to the CPU to another process, and all active processes are cycled through repeatedly?

- a. coalescent processing
- b. cooperative processing
- c. concurrent processing
- d. divisive processing

**ANSWER: c**

47. What is NOT one of the initial four locations connected by the ARPANET in the 1970s?

- a. Stanford Research Institute
- b. University of California at Los Angeles
- c. University of California Santa Barbara
- d. Massachusetts Institute of Technology

**ANSWER: d**

48. Regardless of whether `print` is passed a single or multiple expressions, what does its output always end with by default?

- a. a carriage return
- b. a null terminator
- c. a newline
- d. an EOL

**ANSWER: c**

49. If you want the `print` function on line 2 in the following code to output on the same line as the `print` function on line 1, without printing a newline, what expression should you place in the blank?

```
1 print("Rainbow colors:", "red, orange, yellow, ", _____)
2 print("green, blue, indigo, violet")
```

- a. `terminator = ""`
- b. `end = ""`
- c. `eol = ""`
- d. `newline = 0`

**ANSWER: b**

50. What language was designed based on a theory of recursive functions and is considered to be an ideal language for solving difficult or complex problems?

- a. COBOL
- b. FORTRAN
- c. LISP
- d. Assembler



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**ANSWER: c**

51. What technology replaced the vacuum tube as the mechanism for implementing electronic switches in computer hardware?

- a. transistor
- b. resistor
- c. fully programmable gate array
- d. microprocessor

**ANSWER: a**

52. In the following syntax for the `print` command, what does the ellipsis between expressions indicate?  
`print(<expression>, ..., <expression>)`

- a. The ellipsis indicates that all expressions are required to be included.
- b. The ellipsis indicates that the program has a minimum number of expressions that must be included.
- c. The ellipsis indicates that you must pass a value of specific type to the expression.
- d. The ellipsis indicates that you could include multiple expressions after the first one.

**ANSWER: d**

53. What was the first PC-based operating system called?

- a. Microsoft Disk Operating System (MS-DOS)
- b. UNIX
- c. Linux
- d. Control Program for Microcomputers (CP/M)

**ANSWER: d**