

Chapter 2: Applications and Data

TRUE/FALSE

1. Computers deal with two basic types of data - text and string.

ANS: F PTS: 1 REF: 36

2. A literal numeric constant does not change.

ANS: T PTS: 1 REF: 36

3. An item's data type defines what operations can be performed on the item.

ANS: T PTS: 1 REF: 37

4. A named constant can be assigned a value multiple times.

ANS: F PTS: 1 REF: 39

5. The assignment operator is said to have right-to-left associativity.

ANS: T PTS: 1 REF: 41

6. A noun would be a good choice for a variable or constant identifier.

ANS: T PTS: 1 REF: 45

7. An adjective would be a good choice of identifier for a variable that holds status.

ANS: F PTS: 1 REF: 46

8. In echoing input, the program tells the user the desired form of the input data.

ANS: F PTS: 1 REF: 50

9. Three types of program structures are sequence, selection, and loop.

ANS: T PTS: 1 REF: 51

10. A loop structure does not contain a decision point.

ANS: F PTS: 1 REF: 51

MULTIPLE CHOICE

1. A(n) ____ is a named set of statements that perform some task or group of tasks within an application.
- | | |
|-----------|--------------|
| a. method | c. object |
| b. class | d. flowchart |

ANS: A PTS: 1 REF: 32

2. There will always be only one class ____ for each class.
- a. statement
 - b. method
 - c. header
 - d. footer

ANS: C PTS: 1 REF: 33

3. A(n) ____ is the name of a programming object - for example, a class, method, or variable.
- a. convention
 - b. identifier
 - c. keyword
 - d. class header

ANS: B PTS: 1 REF: 33

4. In an interactive program, a ____ enters data.
- a. disk
 - b. database
 - c. user
 - d. graphical user interface

ANS: C PTS: 1 REF: 35

5. ____ constants do not have identifiers like variables do.
- a. Alphabetic
 - b. Named
 - c. Unnamed
 - d. Uncertain

ANS: C PTS: 1 REF: 36

6. String values are also called ____ values.
- a. unnamed
 - b. digit
 - c. alphabetic
 - d. alphanumeric

ANS: D PTS: 1 REF: 36

7. Which of the following is correct if the data type of `inventoryItem` is `string`?
- a. `inventoryItem = 3`
 - b. `inventoryItem = "printer"`
 - c. `inventoryItem = -9`
 - d. `inventoryItem = (printer)`

ANS: B PTS: 1 REF: 39

8. Which of the following is correct if the data type for `weight` is `num`?
- a. `weight = 2.75`
 - b. `weight = "2.75"`
 - c. `weight = (2.75)`
 - d. `weight = "heavy"`

ANS: A PTS: 1 REF: 39

9. You can use named constants to make your programs easier to understand by eliminating ____.
- a. constants
 - b. variables
 - c. strings
 - d. magic numbers

ANS: D PTS: 1 REF: 40

10. The convention used in this book for named constants is ____ characters ____ underscores to separate words.
- a. uppercase, with
 - b. uppercase, without
 - c. lowercase, with
 - d. lowercase, without

ANS: A PTS: 1 REF: 40

11. A(n) ____ statement stores the value of the right-hand side of the expression in the memory location of the left-hand side.

- a. construct
- b. arithmetic
- c. equals
- d. assignment

ANS: D PTS: 1 REF: 41

12. The ____ dictate the order in which operations in the same statement are carried out.
- a. sequence structures
 - b. named constants
 - c. decision points
 - d. order of operations

ANS: D PTS: 1 REF: 42

13. In the following statement, which arithmetic operation is performed first?
- `answer = a + b + c * d / e - f`
- a. `e-f`
 - b. `a+b`
 - c. `c*d`
 - d. `d/e`

ANS: C PTS: 1 REF: 43

14. In the following statement, which operation is done third?
- `answer = a + b + c * d / e - f`
- a. `a+b`
 - b. `b+c`
 - c. `e-f`
 - d. `d/e`

ANS: A PTS: 1 REF: 43

15. What is an equivalent way to write the following statement?
- `answer = a + b + c * d / e - f`
- a. `answer = a+b+(c*d) / (e-f)`
 - b. `answer = a+b+(c*d) /e-f`
 - c. `answer = a+b+(c*d/e-f)`
 - d. `answer = a+b+c*(d/e) -f`

ANS: B PTS: 1 REF: 43

16. What operator has the lowest precedence?
- a. `+`
 - b. `/`
 - c. `*`
 - d. `=`

ANS: D PTS: 1 REF: 44

17. According to the rules of precedence, ____ has higher precedence than addition.
- a. multiplication
 - b. subtraction
 - c. the equals sign
 - d. assignment

ANS: A PTS: 1 REF: 44

18. What is one drawback to including program comments?
- a. They take up too much memory.
 - b. They must be kept current.
 - c. You cannot use abbreviations.
 - d. They make a program difficult to read.

ANS: B PTS: 1 REF: 45

19. Programmers refer to programs that contain meaningful names as ____.
- a. external documentation
 - b. self-documenting
 - c. internally consistent
 - d. applications

ANS: B PTS: 1 REF: 45

20. A ____ dictionary is a list of every variable name used in a program.

- a. naming
- b. string
- c. constant
- d. data

ANS: D PTS: 1 REF: 46

21. Most modern programming languages are ____, meaning that you can arrange your lines of code as you see fit.

- a. structured
- b. columnar
- c. formatted
- d. free-form

ANS: D PTS: 1 REF: 47

22. What is an advantage of using the practice of echoing input?

- a. The program is shorter.
- b. Memory usage is lower.
- c. There is less chance of syntax errors.
- d. The user is more likely to catch input errors.

ANS: D PTS: 1 REF: 50

23. Sequences never include ____.

- a. terminations
- b. tasks
- c. decisions
- d. steps

ANS: C PTS: 1 REF: 51

24. With a ____ structure, you perform an action or event, and then you perform the next action in order.

- a. loop
- b. decision
- c. selection
- d. sequence

ANS: D PTS: 1 REF: 51

25. In the ____ structure, instructions repeat based on a decision.

- a. sequence
- b. selection
- c. loop
- d. flowchart

ANS: C PTS: 1 REF: 52

COMPLETION

1. If an application contains only one method that executes, that method is called the _____ method.

ANS: main

PTS: 1 REF: 32

2. _____ programs can accept data without human intervention.

ANS:

Batch

batch

PTS: 1 REF: 35-36

3. A _____ constant is enclosed within quotation marks.

ANS: string

PTS: 1 REF: 36

4. _____ are named memory locations with contents that can change.

ANS:
Variables
variables

PTS: 1 REF: 36

5. A variable _____ is a statement that provides a data type and identifier for a variable.

ANS: declaration

PTS: 1 REF: 37

6. Until a variable is initialized, it holds an unknown value referred to as _____.

ANS: garbage

PTS: 1 REF: 38

7. An operand that can be used to the right of an operator is a(n) _____.

ANS: rvalue

PTS: 1 REF: 41

8. The equal sign is the _____ operator.

ANS: assignment

PTS: 1 REF: 41

9. Arithmetic operators have _____ associativity.

ANS:
left-to-right
left to right

PTS: 1 REF: 43

10. The _____ operator has the lowest precedence.

ANS: assignment

PTS: 1 REF: 44

11. Program comments are a type of _____ documentation.

ANS: internal

PTS: 1 REF: 44-45

12. A(n) _____ variable is not used for input or output.

ANS: temporary

PTS: 1 REF: 47

13. A(n) _____ is a message that asks the user for a response.

ANS: prompt

PTS: 1 REF: 48

14. A(n) _____ is a basic unit of programming logic.

ANS: structure

PTS: 1 REF: 51

15. In a(n) _____ structure, one of two branches of logic is followed based on a decision.

ANS: selection

PTS: 1 REF: 52