C++

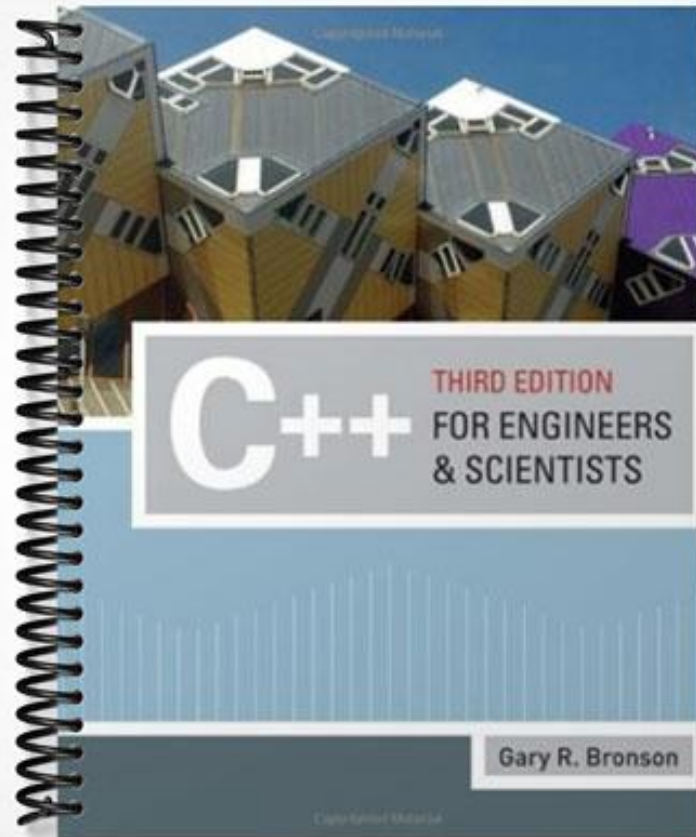**THIRD EDITION**

FOR ENGINEERS & SCIENTISTS

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Ch02

True/False
Indicate whether the statement is true or false.

____ 1. Modular programs are easier to develop, correct, and modify than programs constructed in some other manner.

____ 2. In C++, modules can only be classes.

____ 3. A function encapsulates both data and one or more sets of operations.

____ 4. One important requirement for designing a good function is giving it a name that conveys some idea of what the function does.

____ 5. Except for strings, double quotes, identifiers, and keywords, C++ ignores all white space.

____ 6. C++ is a case-sensitive language.

____ 7. The keyword before the function name defines the type of value the function returns when it has completed operating.

____ 8. Each statement inside the function must end with a colon (:).

____ 9. Programs in C++ can have more than one `main()` function.

____ 10. The `istream` and `ostream` classes provide the data declarations and methods used for data input and output, respectively.

____ 11. Preprocessor commands end with a semicolon.

____ 12. In C++, the backslash (\) character provides an "escape" from the normal interpretation of the character following it and alters its meaning.

____ 13. C++ supports two types of comments: line and block.

____ 14. A data type is defined as a set of values and a set of operations that can be applied to these values.

____ 15. C++ provides ten built-in integer data types.

____ 16. The `int` data type is used to store single characters.

____ 17. A signed data type permits storing negative values in addition to zero and positive values.

____ 18. You cannot add and subtract character data and mix it with integer data to produce useful results.

____ 19. An expression is any combination of operators and operands that can be evaluated to yield a value.

____ 20. To name a variable and specify the data type that can be stored in it, you use declaration statements.

____ 21. Variables used to hold single-precision values are declared by using the keyword `double`.

____ 22. Although declaration statements can be placed anywhere in a function, typically they're grouped together and placed after the function's opening brace.

____ 23. Every variable has three major items associated with it: its data type, the value stored in it, and its address.

____ 24. Omitting the parentheses after `main()` is a common programming error.

____ 25. Closing a string sent to `cout` with a double quote symbol is a common programming error.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 26. Programs with a structure consisting of interrelated segments, called ____, are arranged in a logical, easily understandable order to form an integrated and complete unit.
- a. blocks
- b. modules
- c. units
- d. procedures

____ 27. ____ programs are easier to develop, correct, and modify than programs constructed in some other manner.
- a. Modular
- b. Handwritten
- c. Sequential
- d. Low-level

____ 28. A ____ contains both data and functions appropriate for manipulating the data.
- a. segment
- b. block
- c. class
- d. function

____ 29. A(n) ____ is a word the language sets aside for a special purpose and can be used only in a specified manner.
- a. codeword
- b. keyword
- c. identifier
- d. classname

____ 30. The maximum number of characters in a function name is ____.
- a. 128
- b. 256
- c. 512
- d. 1024

____ 31. A(n) ____ is a word designed as a memory aid.
- a. mnemonic
- b. keyword
- c. reserved word
- d. identifier

____ 32. The `main()` function is referred to as a(n) ____ function because it tells other functions the sequence in which they execute.
- a. logical
- b. auxiliary
- c. driver
- d. class

____ 33. Data transmitted to a function at runtime is referred to as the ____ of the function.
- a. return value
- b. arguments
- c. body
- d. structure

____ 34. The ____ is an output object that sends data it receives to the standard display device.
- a. `out`
- b. `cin`
- c. `print`
- d. `cout`

____ 35. Preprocessor commands begin with a(n) ____ sign.
- a. `#`
- b. `!`
- c. `//`
- d. `*/`

____ 36. ____ in C++ are any combination of letters, numbers, and special characters enclosed in quotation marks.
- a. Arrays
- b. Strings
- c. Enums
- d. Objects

____ 37. The newline escape sequence is ____.
- a. `\l`
- b. `\r`
- c. `\n`
- d. `\t`

____ 38. ____ are explanatory remarks made in a program.
- a. Comments
- b. Strings
- c. Escape sequences
- d. Classes

____ 39. A ____ begins with two slashes (`//`) and continues to the end of the line.

a. program comment   c. block comment
b. function comment   d. line comment

____ 40. A(n) ____ is an acceptable value for a data type.
a. primitive value   c. built-in value
b. literal   d. class value

____ 41. The three most important and common integer types used in most applications are int, char, and ____.
a. `long int`   c. `bool`
b. `unsigned char`   d. `long`

____ 42. The C++ operator ____ provides the number of bytes used to store values for any data type named in the operator's parentheses.
a. `size()`   c. `length()`
b. `sizeof()`   d. `lengthof()`

____ 43. A(n) ____ number, more commonly known as a real number, can be the number zero or any positive or negative number that contains a decimal point.
a. boolean   c. long int
b. integer   d. floating-point

____ 44. A(n) ____ is an item used to manipulate how the output stream of characters is displayed.
a. manipulator   c. string
b. escape sequence   d. char object

____ 45. A(n) ____ is simply a name the programmer assigns to refer to computer storage locations.
a. constant   c. expression
b. variable   d. identifier

____ 46. A(n) ____ data value is considered a complete entity and can't be decomposed into a smaller data type supported by the language.
a. composed   c. complex
b. atomic   d. real

____ 47. When a declaration statement is used to store a value into a variable, the variable is said to be ____.
a. initialized   c. reserved
b. deleted   d. used

____ 48. The value stored in the variable is referred to as the variable's ____.
a. address   c. data
b. location   d. contents

____ 49. To determine the address of a variable, we can use C++'s address operator, ____, which means "the address of."
a. *   c. &
b. =   d. !

____ 50. A common programming error consists of forgetting to separate data streams sent to cout with the insertion symbol, ____.
a. <   c. >>
b. >   d. <<

Ch02
Answer Section

TRUE/FALSE

   1. ANS: T   PTS: 1   REF: 44
   2. ANS: F   PTS: 1   REF: 44
   3. ANS: F   PTS: 1   REF: 44
   4. ANS: T   PTS: 1   REF: 45
   5. ANS: T   PTS: 1   REF: 54
   6. ANS: T   PTS: 1   REF: 46
   7. ANS: T   PTS: 1   REF: 46
   8. ANS: F   PTS: 1   REF: 46
   9. ANS: F   PTS: 1   REF: 46
  10. ANS: T   PTS: 1   REF: 48
  11. ANS: F   PTS: 1   REF: 48
  12. ANS: T   PTS: 1   REF: 50
  13. ANS: T   PTS: 1   REF: 55
  14. ANS: T   PTS: 1   REF: 58
  15. ANS: F   PTS: 1   REF: 59
  16. ANS: F   PTS: 1   REF: 60
  17. ANS: T   PTS: 1   REF: 64
  18. ANS: F   PTS: 1   REF: 68
  19. ANS: T   PTS: 1   REF: 70
  20. ANS: T   PTS: 1   REF: 78
  21. ANS: F   PTS: 1   REF: 78
  22. ANS: T   PTS: 1   REF: 78
  23. ANS: T   PTS: 1   REF: 85
  24. ANS: T   PTS: 1   REF: 94
  25. ANS: F   PTS: 1   REF: 94

MULTIPLE CHOICE

  26. ANS: B   PTS: 1   REF: 43
  27. ANS: A   PTS: 1   REF: 44
  28. ANS: C   PTS: 1   REF: 45
  29. ANS: B   PTS: 1   REF: 45
  30. ANS: D   PTS: 1   REF: 45
  31. ANS: A   PTS: 1   REF: 46
  32. ANS: C   PTS: 1   REF: 46
  33. ANS: B   PTS: 1   REF: 46
  34. ANS: D   PTS: 1   REF: 48
  35. ANS: A   PTS: 1   REF: 48
  36. ANS: B   PTS: 1   REF: 50
  37. ANS: C   PTS: 1   REF: 50
  38. ANS: A   PTS: 1   REF: 55

39.	ANS: D	PTS: 1	REF: 55
40.	ANS: B	PTS: 1	REF: 58
41.	ANS: C	PTS: 1	REF: 59
42.	ANS: B	PTS: 1	REF: 62
43.	ANS: D	PTS: 1	REF: 65
44.	ANS: A	PTS: 1	REF: 70
45.	ANS: B	PTS: 1	REF: 76
46.	ANS: B	PTS: 1	REF: 79
47.	ANS: A	PTS: 1	REF: 82
48.	ANS: D	PTS: 1	REF: 85
49.	ANS: C	PTS: 1	REF: 86
50.	ANS: D	PTS: 1	REF: 95