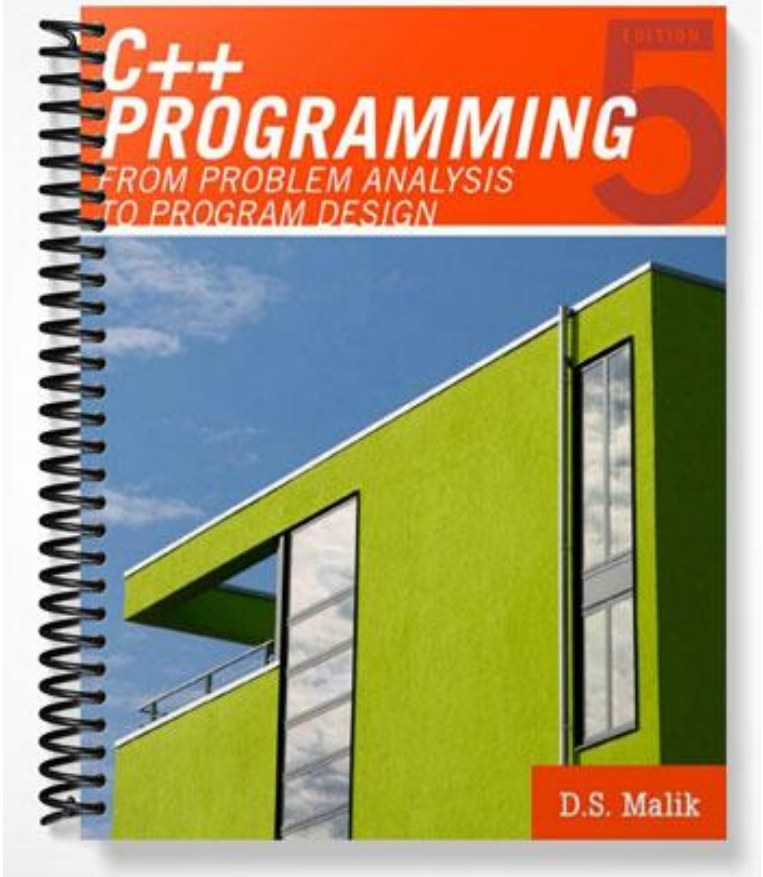
TEST BANK


C++
PROGRAMMING
FROM PROBLEM ANALYSIS
TO PROGRAM DESIGN
5
EDITION
D.S. Malik

ch02

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

____ 1. Every C++ program must have a function called `main`.

____ 2. In C++, reserved words are the same as predefined identifiers.

____ 3. A reserved word can be used as a variable name.

____ 4. An identifier can be any sequence of digits, letters, and the underscore character.

____ 5. The following is a legal C++ identifier: `Hello!`

____ 6. The value `'*'` belongs to the char data type.

____ 7. The maximum number of significant digits in `float` values is up to 6 or 7.

____ 8. The maximum number of significant digits in values of the `double` type is `15`.

____ 9. An operator that has only one operand is called a unique operator.

____ 10. Multiplication and division have the same operator precedence.

____ 11. If a C++ arithmetic expression has no parentheses, operators are evaluated from left to right.

____ 12. A mixed arithmetic expression contains all operands of the same type.

____ 13. The explicit conversion of a value from one data type to another is called type casting.

____ 14. The null string contains one character.

____ 15. The value of a variable cannot change during program execution.

____ 16. Suppose that `count` is an `int` variable. The statements `++count;` and `count++;` both increment the value of `count` by `1`.

____ 17. Suppose that `count` is an `int` variable. The statements `--count;` and `count--;` both decrement the value of `count` by `2`.

____ 18. Suppose that `alpha` and `beta` are `int` variables. The statement `alpha = beta++;` is equivalent to the statement `alpha = ++beta;`.

____ 19. Suppose `x = 8`. After the execution of the statement `y = x++;` `y` is `9` and `x` is `8`.

____ 20. Suppose `a = 4`. After the execution of the statement `b = ++a;` `b` is `4` and `a` is `5`.

____ 21. Suppose `a = 5`. After the execution of the statement `++a;` the value of `a` is `6`.

____ 22. `The` escape sequence `\r` moves the insertion point to the beginning of the next line.

____ 23. A C++ program is processed by the preprocessor before being processed by the compiler.

____ 24. All preprocessor statements start with the symbol `#`.

____ 25. A comma is also called a statement terminator.

____ 26. In an interactive program, when reading data, prompt lines are used to inform the user what kind of input is required.

____ 27. Suppose that `sum` is an `int` variable. The statement `sum += 7;` is equivalent to the statement `sum = sum + 7;`

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

____ 28. The ____ rules of a programming language tell you which statements are legal, or accepted by the programming language.
a. semantic
b. logical
c. syntax
d. grammatical

____ 29. Which of the following is a reserved word in C++?
a. `char`
b. `Char`
c. `CHAR`
d. character

____ 30. Which of the following is a legal identifier?
a. `program!`
b. `program_1`
c. `1program`
d. `program 1`

____ 31. An example of a floating point data type is ____.
a. `int`
b. `char`
c. `double`
d. `short`

____ 32. ____ is a valid `int` value.
a. `46,259`
b. `46259`
c. `462.59`
d. `-32.00`

____ 33. ____ is a valid `char` value.
a. `-129`
b. `'A'`
c. `128`
d. `129`

____ 34. The memory allocated for a float value is ____ bytes.
a. two
b. four
c. eight
d. sixteen

____ 35. The value of the expression `33/10`, assuming both values are integral data types, is ____.
a. `0.3`
b. `3`
c. `3.0`
d. `3.3`

____ 36. The value of the expression `17 % 7` is ____.
a. `1`
b. `2`
c. `3`
d. 4

____ 37. The expression `static_cast<int>(9.9)` evaluates to ____.
a. `9`
b. `10`
c. `9.9`
d. `9.0`

____ 38. The expression `static_cast<int>(6.9) + static_cast<int>(7.9)` evaluates to ____.
a. `13`
b. `14`
c. `14.8`
d. `15`

____ 39. The length of the string "`computer science`" is ____.
a. 14
b. 15
c. 16
d. 18

____ 40. In a C++ program, `one` and `two` are `double` variables and input values are `10.5 and 30.6`. After the statement `cin >> one >> two;` executes, ____.
a. `one = 10.5, two = 10.5`
b. `one = 10.5, two = 30.6`
c. `one = 30.6, two = 30.6`
d. `one = 11, two = 31`

____ 41. Suppose that `count` is an `int` variable and `count = 1`. After the statement `count++;` executes, the value of `count` is ____.

a. `1`
c. `3`
b. `2`
d. `4`

____ 42. Suppose that `alpha` and `beta` are `int` variables. The statement `alpha = --beta;` is equivalent to the statement(s) ____.

a.
```
alpha = 1 - beta;
```
b.
```
alpha = beta - 1;
```
c.
```
beta = beta - 1;
alpha = beta;
```
d.
```
alpha = beta;
beta = beta - 1;
```

____ 43. Suppose that `alpha` and `beta` are `int` variables. The statement `alpha = beta--;` is equivalent to the statement(s) ____.

a.
```
alpha = 1 - beta;
```
b.
```
alpha = beta - 1;
```
c.
```
beta = beta - 1;
alpha = beta;
```
d.
```
alpha = beta;
beta = beta - 1;
```

____ 44. Suppose that `alpha` and `beta` are `int` variables. The statement `alpha = beta++;` is equivalent to the statement(s) ____.

a.
```
alpha = 1 + beta;
```
b.
```
alpha = alpha + beta;
```
c.
```
alpha = beta;
beta = beta + 1;
```
d.
```
beta = beta + 1;
alpha = beta;
```

____ 45. Suppose that `alpha` and `beta` are `int` variables. The statement `alpha = ++beta;` is equivalent to the statement(s) ____.

a.
```
beta = beta + 1;
alpha = beta;
```
b.
```
alpha = beta;
beta = beta + 1;
```
c.
```
alpha = alpha + beta;
```
d.
```
alpha = beta + 1;
```

____ 46. Choose the output of the following C++ statement:

```
cout << "Sunny " << '\n' << "Day " << endl;
```

a.
```
Sunny \nDay
```
b.
```
Sunny \nDay endl
```
c.
```
Sunny
Day
```
d.
```
Sunny \n
Day
```

____ 47. Which of the following is the newline character?

a. `\r`
c. `\l`
b. `\n`
d. `\b`

____ 48. Consider the following code.

```
// Insertion Point 1

using namespace std;
const float PI = 3.14;

int main()
{
    //Insertion Point 2

    float r = 2.0;
    float area;
    area = PI * r * r;

    cout << "Area = " << area <<endl;
    return 0;
 }
// Insertion Point 3
```

In this code, where does the `include` statement belong?

a. Insertion Point 1
b. Insertion Point 2
c. Insertion Point 3
d. Anywhere in the program

____ 49. ____ are executable statements that inform the user what to do.

a. Variables
b. Prompt lines
c. Named constants
d. Expressions

____ 50. The declaration `int a, b, c;` is equivalent to which of the following?

a. `inta , b, c;`
b. `int a,b,c;`
c. `int abc;`
d. `int a b c;`

____ 51. Suppose that `sum` and `num` are `int` variables and `sum = 5` and `num = 10`. After the statement `sum += num` executes, ____.

a. `sum = 0`
b. `sum = 5`
c. `sum = 10`
d. `sum = 15`

____ 52. Suppose that `alpha` and `beta` are `int` variables and `alpha = 5` and `beta = 10`. After the statement `alpha *= beta;` executes, ____.

a. `alpha = 5`
b. `alpha = 10`
c. `alpha = 50`
d. `alpha = 50.0`

ch02
Answer Section

TRUE/FALSE

1.	ANS:	T	PTS: 1	REF:	31
2.	ANS:	F	PTS: 1	REF:	33
3.	ANS:	F	PTS: 1	REF:	33
4.	ANS:	F	PTS: 1	REF:	33
5.	ANS:	F	PTS: 1	REF:	34
6.	ANS:	T	PTS: 1	REF:	37
7.	ANS:	T	PTS: 1	REF:	39
8.	ANS:	T	PTS: 1	REF:	39
9.	ANS:	F	PTS: 1	REF:	40
10.	ANS:	T	PTS: 1	REF:	43
11.	ANS:	T	PTS: 1	REF:	43
12.	ANS:	F	PTS: 1	REF:	45
13.	ANS:	T	PTS: 1	REF:	47
14.	ANS:	F	PTS: 1	REF:	49
15.	ANS:	F	PTS: 1	REF:	52
16.	ANS:	T	PTS: 1	REF:	66
17.	ANS:	F	PTS: 1	REF:	66
18.	ANS:	F	PTS: 1	REF:	66-67
19.	ANS:	F	PTS: 1	REF:	67
20.	ANS:	F	PTS: 1	REF:	67
21.	ANS:	T	PTS: 1	REF:	67
22.	ANS:	F	PTS: 1	REF:	73
23.	ANS:	T	PTS: 1	REF:	75
24.	ANS:	T	PTS: 1	REF:	75
25.	ANS:	F	PTS: 1	REF:	85
26.	ANS:	T	PTS: 1	REF:	86
27.	ANS:	T	PTS: 1	REF:	90

MULTIPLE CHOICE

28.	ANS:	C	PTS: 1	REF:	31
29.	ANS:	A	PTS: 1	REF:	33
30.	ANS:	B	PTS: 1	REF:	33-34
31.	ANS:	C	PTS: 1	REF:	38
32.	ANS:	B	PTS: 1	REF:	37
33.	ANS:	B	PTS: 1	REF:	37
34.	ANS:	B	PTS: 1	REF:	39
35.	ANS:	B	PTS: 1	REF:	41-42
36.	ANS:	C	PTS: 1	REF:	41-42
37.	ANS:	A	PTS: 1	REF:	47
38.	ANS:	A	PTS: 1	REF:	48

39.	ANS: C	PTS: 1	REF: 50
40.	ANS: B	PTS: 1	REF: 59-60
41.	ANS: B	PTS: 1	REF: 66
42.	ANS: C	PTS: 1	REF: 67
43.	ANS: D	PTS: 1	REF: 67
44.	ANS: C	PTS: 1	REF: 67
45.	ANS: A	PTS: 1	REF: 67
46.	ANS: C	PTS: 1	REF: 69
47.	ANS: B	PTS: 1	REF: 69
48.	ANS: A	PTS: 1	REF: 75
49.	ANS: B	PTS: 1	REF: 86
50.	ANS: B	PTS: 1	REF: 87
51.	ANS: D	PTS: 1	REF: 89-90
52.	ANS: C	PTS: 1	REF: 89-90