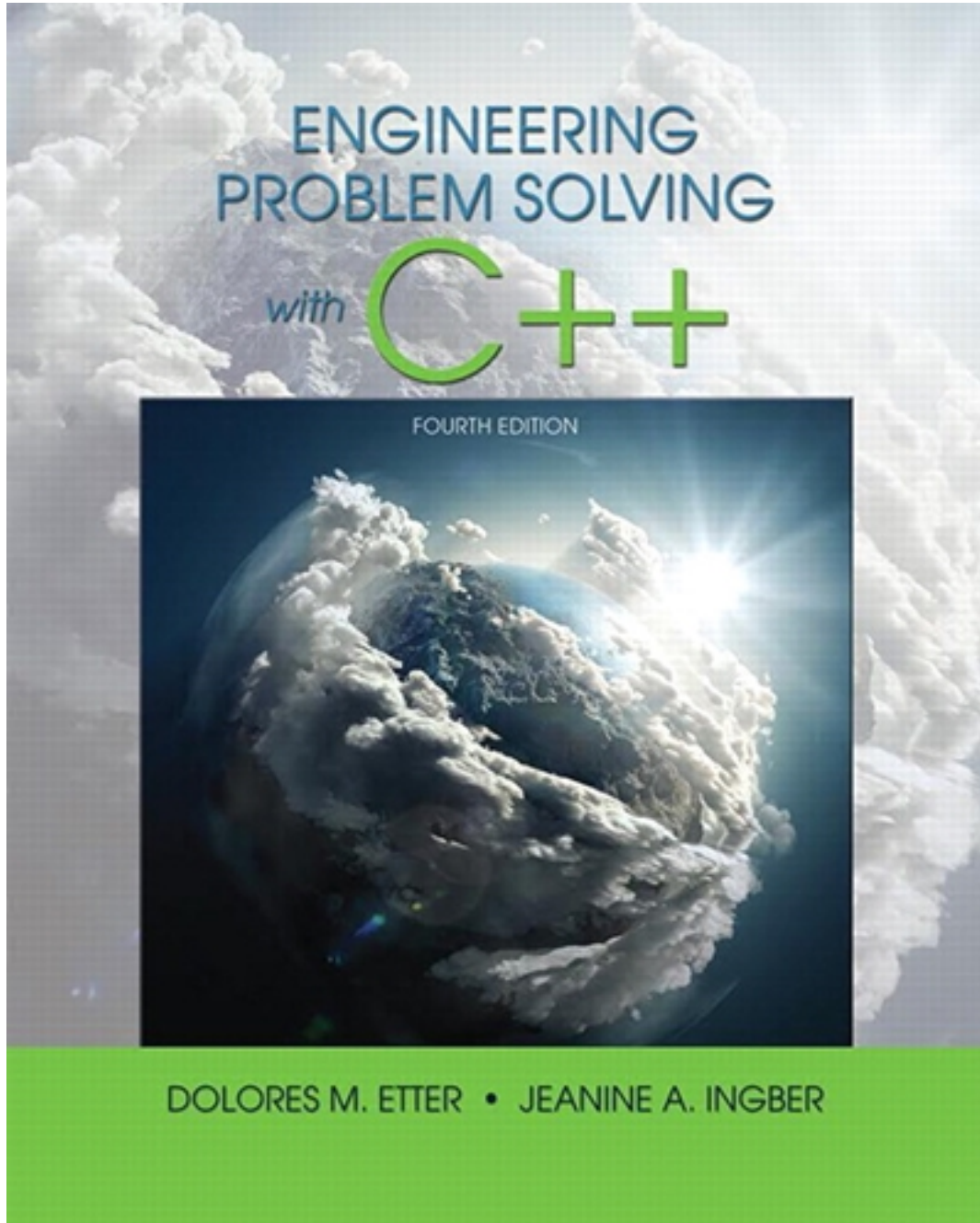


Test Bank for Engineering Problem Solving With C++ 4th Edition by Etter

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Test Bank

Engineering Problem Solving with C++, 3e Chapter 2 Test Bank

1. Match each of the following data types with literal constants of that data type. A data type can be used more than once.

A. integer	<u> B </u>	1.427E3
B. double	<u> D </u>	"Oct"
C. character	<u> B </u>	-63.29
D. string	<u> F </u>	#Hashtag
E. boolean	<u> C </u>	'+'
F. none of the above.	<u> A </u>	-85
	<u> E </u>	true
	<u> C </u>	'\"'

2. For each of the following determine if it is a valid identifier, and if it is not state why.

A. House#	not valid, # is not allowed in identifier
B. 2nd	not valid, identifiers must start with letter or underscore not a number
C. WHILE	valid
D. num4	valid
E. double	not valid, double is a keyword
F. last_name	valid

3. Evaluate the following expressions

A. (4 - 7) * 3	-9
B. 14 % 4	2
C. 24 / 9	2
D. 6.72 / 4.2	1.6
E. 2 + 8 * 3 + 7	33

4. What is the output of the following program.

```
#include <iostream>
#include <iomanip>
using namespace std;
int main ()
{ int hr, min;
  hr = 1;
  min = 50;
  cout << "The exam is over at " << hr << ":" << min << endl;
  cout << "One down\n " << "two to go!" ;
  return 0;
}
```

The exam is over at 1:50
One down
two to go!

Engineering Problem Solving with C++, 3e Chapter 2 Test Bank

5. What is the output of the following program

```
#include <iostream>
#include <iomanip>
using namespace std;
int main()
{ int WholeNumber;
  double Real1, Real2;
  WholeNumber = 76;
  Real1 = 3.167;
  Real2 = -24.103;
  cout << setw(6) << WholeNumber << endl;
  cout << setiosflags(ios::fixed);
  cout << setprecision(2) << Real1 << ", " << Real2 << endl;
  cout << setiosflags(ios::showpoint) << Real2 << 8.376 << endl;
  return 0;
}
```

```
      76
3.17, -24.10
-24.108.38
```

6. Which of the following are valid on the left side of an assignment operator?
- A. A numeric constant
 - B. An expression such as 8*6
 - C. A declared constant
 - ☒ D. A variable
 - E. All of the above are valid on the left side of an assignment operator.
7. Which of the following are valid on the right side of an assignment operator?
- A. A numeric constant
 - B. An expression such as 8*6
 - C. A declared constant
 - D. A variable
 - ☒ E. All of the above are valid on the right side of an assignment operator.
8. The operator >> is used to
- ☒ A. Extract a value from the input stream and assign it to a variable
 - B. Take a value from a variable and place it into the output stream
 - C. Perform integer division and produce the remainder of the division
 - D. Specify that the left hand operand is much larger than the right hand operand.
9. The file which must appear in a #include preprocessor statement if you are using the fabs function is ...
- A. iostream
 - B. iomanip
 - ☒ C. cmath
 - D. string

Engineering Problem Solving with C++, 3e Chapter 2 Test Bank

10. Which of the following is not a data type used to represent a floating point value
- A. float
 - B. double
 - C. long double
 - ☒ D. short
11. Which of the following is not a syntactically correct declaration?
- A. `int number(12);`
 - ☒ B. `double value1(4.5); value2(3.7);`
 - C. `double tax_percent = 0.06;`
 - D. `double x{0.0};`
 - E. `int x,y,z;`
12. Which of the following operators is the increment operator
- A. `+=`
 - B. `+`
 - C. `%`
 - ☒ D. `++`
13. Which output flag is set to guarantee that a decimal point will be printed when printing a floating point value?
- A. `fixed`
 - ☒ B. `showpoint`
 - C. `precision`
 - D. `setw`
14. Function arguments are ...
- A. the term used for the name of the function
 - B. the term that refers to the value returned by a function
 - ☒ C. the term that refers to the values passed to the function when the function is invoked.
 - D. the term that refers to a function invocation.
15. Which of the following function invocations is an approximation of PI
- A. `atan(-1);`
 - ☒ B. `acos(-1);`
 - C. `sin(-1);`
 - D. `cos(-1);`
16. Line comments begin with `//` and run for the rest of the line
- ☒ A. true
 - B. false
17. The purpose of a comment is to help the compiler understand your program and create efficient object code.
- A. true
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Engineering Problem Solving with C++, 3e Chapter 2 Test Bank

18. The math function `sin` will compute sine when given the angle in degrees
- A. true
 - ☒ B. false
19. The `setw` manipulator is used to set the field width for all values that are printed until another `setw` manipulator is encountered.
- A. true
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20. The preprocessor directive `#include <iostream>` copies the file `iostream` into the program before compilation, so that the program can use input and output objects and operators.
- ☒ A. true
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21. The operand of the increment operator may be either a declared constant or a variable.
- A. true
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22. The math function `tan` will compute tangent when the angle is given in radians.
- ☒ A. true
 - B. false
23. In a case sensitive language, such as C++, the variables **apples** and **APPLES** refer to different storage locations.
- ☒ A. true
 - B. false
24. An expression involving operators can appear after the output operator `<<` in a `cout` statement.
- ☒ A. true
 - B. false
25. The precision of a floating point number is determined by the number of bits used to represent the exponent.
- ☒ A. true
 - B. false
26. Given the declaration `auto i = 0;` `i` is declared as an `int`.
- ☒ A. True
 - B. False
27. Given the declaration `auto i = 1.0;` `i` is declared as type `double`.
- ☒ A. True
 - B. False

Engineering Problem Solving with C++, 3e Chapter 2 Test Bank

28. C++ is a strongly typed programming language.
☒ A. True
B. False
C.
29. Symbolic constants in C++ are declared with the modifier const; attempting to change the value of a symbolic constant will be flagged as a syntax error by the compiler.
☒ A. True
B. False
30. Class declarations specify a programmer-defined type/object.
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31. Class members may include data (attributes) and methods (functions).
☒ A. True
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32. Which of the following visibilities by be used to control access to class members:
A. public
B. protected
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☒ D. All of these are visibilities used to control access to class members.
33. Class attributes define the operations that may be performed on class objects.
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34. Constructors are special methods of a class that are executed when objects of the class type are created.
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35. Constructors must have the same name as the class
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36. There must be exactly one constructor defined in every class.
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37. Once a class is defined, you may use the class as a type specifier.
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