

## Chapter 2

### **Short Answer:**

1. What symbol indicates that the following line is a comment?

Answer: // (or /\*)

2. What are the two kinds of statements inside a function?

Answer: Declaration statements and executable statements

3. What does the following statement do?

```
cout << "This is good.";
```

Answer: It displays the words

This is good  
on the screen

4. What C++ word is used to read information in from the keyboard?

Answer: cin

5. What is the name for a word that has a specific meaning in C++?

Answer: Reserved word (or keyword)

6. What is an identifier?

Answer: A name for the data elements used in a program.

7. What would be the best choice for the data type for a person's middle initial?

Answer: char

8. What would be the best choice for the data type for the distance between two houses?

Answer: float (or double or long double)

9. Write the following number in normal decimal notation:

734E-4

Answer: 0.0734

10. What is the escape sequence for a linefeed?

Answer: '\n'

11. What is the following kind of statement called?

```
int counter;
```

Answer: A variable declaration.

12. If the variables **name** and **color** contain these values:

<u>name</u>	<u>color</u>
"Elmo"	"red"

write a statement **using these variables** that will output:

Elmo, the puppet, is red!

Answer: `cout << name << ", the puppet, is " << color << "!"`;

13. What is a prompt?

Answer: An output statement that informs the user what to enter.

14. What is the output of the following code segment if the data entered are 3, 2 and 4?

```
int x, y, z;
cout << "Enter three numbers: ";
cin >> x >> y >> z;
y = x + z;
x = z + 1;
cout << x << " " << y << " " << z;
```

Answer: 5 7 4

15. Why do programmers use comments?

Answer: To help others read and understand the program.

16. What is the result of the following arithmetic expression?

$$5 + 7/3$$

Answer: 7

17. What is the result of the following arithmetic expression?

$$7 - 2 * (4 + 1)$$

Answer: -3

18. Write the following statement in C++:

$$a = 2bc^3$$

Answer:  $a = 2 * b * c * c * c$

19. Write the following statement in C++:

$$x = \frac{3y}{5 - z}$$

Answer:  $x = (3 * y) / (5 - z)$  OR  $x = 3 * y / (5 - z)$

20. If data is being read from a file for a program in batch mode, a prompt is replaced with what?

Answer: An echo.

### **Multiple Choice:**

1. iostream is part of:

- a) the comment section
- b) the C++ standard library
- c) the compiler
- d) the main function

Answer: B

2. Which of the following lines must end with a semicolon (;)?

- a) `#include <iostream>`
- b) `int main ( )`
- c) `// a comment`
- d) `using namespace std`

Answer: D

3. Which of the following is a compiler directive:

- a) `#include <iostream>`
- b) `using namespace std;`
- c) `int main ( )`
- d) `return 0;`

Answer: A

4. **main** is a:

- a) compiler directive
- b) comment

- c) function
- d) namespace

Answer: C

5. Which of the following is **not** a C++ reserved word?

- a) float
- b) number
- c) const
- d) using

Answer: B

6. Which of the following could be used as an identifier?

- a) first\_name
- b) 5stars
- c) small number
- d) yes&no

Answer: A

7. Which of the following is **not** a valid identifier?

- a) Pig3
- b) I\_HAVE\_A\_DOG
- c) help!
- d) \_answer

Answer: C

8. Which of the following would be the best choice for a pay rate of a student?

- a) payrate
- b) PAYRATE
- c) p
- d) pay\_rate

Answer: D

9. What would be the best choice for the data type for a person's take home pay?

- a) int
- b) float
- c) char

d) string

Answer: B

10. What would be the best choice for the data type for the number of students in a class?

- a) int
- b) float
- c) bool
- d) char

Answer: A

11) What would be the best choice of data type for a person's address?

- a) int
- b) float
- c) char
- d) string

Answer: D

12) Which of the following statements is correct?

- a) float num1; num2;
- b) int day, night;
- c) int blue = 5.0;
- d) string black = 'white';

Answer: B

13) What is the value of the following arithmetic expression if the variables have these

values:	p	s	x
		5	20
			6

$$p + 3 * x - s$$

- a) -37
- b) 3
- c) 28
- d) 59

Answer: B

14) What is the value of the following arithmetic expression if the variables have these

values?	a	b	c
	7	3	10

$$a + b \% c$$

- a) 0
- b) 7
- c) 7.3
- d) 10

Answer: D

15) What kind of error is the following:  
float height = 6.0,

- a) syntax
- b) logic
- c) run-time
- d) undetected

Answer: A

**True/False:**

1. The computer will carry out the instructions that follow the symbol //

Answer: False

2. A program must have a main function.

Answer: True

3. The following is an example of a declaration statement:  
cout << "Enter a number: ";

Answer: False

4. An identifier must start with a letter or an underscore.

Answer: True

5. It is best to use very short identifiers.

Answer: False

6. In the statement:  
cout << "Hello!"  
"Hello!" is called a string literal.

Answer: True

7. There is no limit on the size of the numbers that can be stored in the **int** data type.

Answer: False

8. 76.45e-2 is a valid value for a float data type.

Answer: True

9. There are only two possible values for the **bool** data type.

Answer: True

10. All data types take up the same amount of storage.

Answer: False

11. It is good program style to put spaces between words and symbols.

Answer: True

12. A C++ statement cannot extend over more than one line.

Answer: False

13. In C++ addition is always evaluated before subtraction.

Answer: False

14. The value of 3/7 is 0.

Answer: True

15. >> is used for output.

Answer: False