

Quiz: Chapter 6

Due Jul 10 at 11:59pm **Points 100** **Questions 40**

Available until Jul 21 at 11:59pm **Time Limit** 80 Minutes

Allowed Attempts Unlimited

Instructions

This quiz consists of 40 questions from Chapter 6. You have 80 minutes to complete the quiz. You may retake this quiz as many times as you would like. You cannot use your textbook or any other materials, so make sure you are familiar with the content prior to taking the quiz.

[Take the Quiz Again](#)

Attempt History

	Attempt	Time	Score
KEPT	<u>Attempt 2</u>	16 minutes	97.5 out of 100
LATEST	<u>Attempt 2</u>	16 minutes	97.5 out of 100
	<u>Attempt 1</u>	44 minutes	90 out of 100

! Correct answers are hidden.

Score for this attempt: **97.5** out of 100

Submitted Jul 15 at 7:08pm

This attempt took 16 minutes.

Question 1

2.5 / 2.5 pts

Given the function prototype:

```
double testAlpha(int u, char v, double t);
```

which of the following statements is legal?

- cout << testAlpha ("5.0", 'A', "2.0");
- cout << testAlpha (5.0, "65", 2.0);
- cout << testAlpha (5, 'A', 2);

Correct. This statement is valid. In the function call `testAlpha (5, 'A', 2)`, the actual parameters matches with the types of their corresponding formal parameters.

- cout << testAlpha(int 5, char 'A', int 2);

Question 2

2.5 / 2.5 pts

The following return statement returns the value 10.

```
return 10, 16;
```

- False

If a `return` statement has more than one expression, it returns only the value of the last expression. Therefore, this `return` statement returns 16.

- True

Question 3

2.5 / 2.5 pts

In C++, a function prototype is the function heading without the body of the function.

False True

A function prototype is usually the function heading ending with a semicolon ";" without the function body.

Question 4**2.5 / 2.5 pts**

What value is returned by the following `return` statement?

```
int x = 5;  
return x + 1;
```

 5 6

Correct. The value of `x` is 5 and when the statement `return x + 1;` is executed, it returns the value 6.

 7 0**Question 5****2.5 / 2.5 pts**

The output of the statement:

```
cout << pow(3.0, 2.0) + 5 << endl;
```

is ____.

13.0

12.0

11.0

14.0

Correct. The expression $\text{pow}(3.0, 2.0) + 5$ evaluates to $3.0^{2.0} + 5 = 14.0$. Therefore, the output of the `cout` statement is: 14.0

Question 6

2.5 / 2.5 pts

The heading of a function is also called a ____.

function head

function header

Correct. The heading of a function is also called a function header.

function signature

title

Question 7

2.5 / 2.5 pts

Which of the following statement about function prototypes and function headers is true?

- Function headers should come before function prototypes.
- Parameter names must be listed in the function prototype, but not necessarily in the function header.
- Function headers end with a semicolon, but function prototypes do not.
- Function prototypes end with a semicolon, but function headers do not.

Correct. Function prototypes end with a semicolon, but function headers do not.

Question 8

2.5 / 2.5 pts

The statement:

```
return 37, y, 2 * 3;
```

returns the value ____.

- 6

Correct. If a `return` statement has more than one expression, it returns only the value of the last expression. Therefore, this `return` statement evaluates $2 * 3$, which is 6, and returns 6.

- Y

- 3

2**Question 9****2.5 / 2.5 pts**

The output of the statement:

```
cout << pow(2.0, pow(3.0, 1.0)) << endl;
```

is ____.

 8.0

Correct. The expression $\text{pow}(2.0, \text{pow}(3.0, 1.0))$ evaluates to $\text{pow}(2.0, 3.0^{1.0}) = \text{pow}(2.0, 3.0) = 2.0^{3.0} = 8.0$.

Therefore, the output of the cout statement is: 8.0

 7.0 9.0 6.0**Question 10****2.5 / 2.5 pts**

The statement:

```
return 2 * 3 + 1, 1 + 5;
```

returns the value ____.

2 7 3 6

Correct. If a `return` statement has more than one expression, it returns only the value of the last expression. Therefore, this `return` statement evaluates `1 + 5`, which is 6, and returns 6.

Question 11

2.5 / 2.5 pts

A variable listed in a function header is known as a(n) _____ parameter.

 function actual formal

Correct. A variable listed in a function header is known as a formal parameter.

 local

Question 12

2.5 / 2.5 pts

Given the following function prototype:

```
int test(float, char);
```

which of the following statements is valid?

- cout << test("12", "&");
- cout << test("12.0", "&");
- int u = test(5.0, '*');

Correct. In the function call `test(5.0, '*')`, both actual parameters match with their corresponding formal parameters type.

- cout << test(12, &);

Question 13

2.5 / 2.5 pts

The output of the statement:

```
cout << tolower('$') << endl;
```

is ____.

- '1'
- An error, because you cannot use tolower with '\$'.
- '\$'

Correct The expression `tolower(x)` returns the lowercase value of `x` if `x` is uppercase; otherwise it returns `x`. Because '\$' is not an uppercase, it returns '\$'. Therefore, the output of the `cout` statement is: \$

'0'**Question 14****2.5 / 2.5 pts**

The standard header file for the `abs (x)` function is ____.

 <cctype> <cstdlib> <cmath>

Correct. The function `abs (x)` is defined in the standard header file `cmath`.

 <iomanip>**Question 15****2.5 / 2.5 pts**

The statement:

```
return 8, 10;
```

returns the value ____.

 18 80 8

10

Correct. If a `return` statement has more than one expression, it returns only the value of the last expression. Therefore, this `return` statement returns 10.

Question 16

2.5 / 2.5 pts

A variable or expression listed in a call to a function is called a(n) ____.

- type of the function
- actual parameter

Correct. A variable or expression listed in a call to a function is called an actual parameter.

- formal parameter
- data type

Question 17

2.5 / 2.5 pts

Using functions greatly enhances a program's readability because it reduces the complexity of the function `main`.

- False
- True

Usage of functions can enhance the readability of the program since it minimizes "main" function's complexity.

Question 18**2.5 / 2.5 pts**

The execution of a `return` statement in a user-defined function terminates the program.

False

Execution of a `return` statement in the `main` function results in the program termination. The execution of a `return` statement in a user-defined function terminates the function.

True

Question 19**2.5 / 2.5 pts**

A function prototype is ____.

- a declaration and a definition
- a comment line
- a declaration, but not a definition

Correct. A function prototype is a declaration, but not a definition.

- a definition, but not a declaration

Question 20

2.5 / 2.5 pts

_____ parameters are useful in three situations:

- When the value of the actual parameter needs to be changed
- When you want to return more than one value from a function
- When passing the address would save memory space and time relative to copying a large amount of data

- Reference
- Value

Question 21

2.5 / 2.5 pts

Assume the following.

```
static_cast<int>('a') = 97  
static_cast<int>('A') = 65
```

The output of the statement:

```
cout << static_cast<int>(tolower('B')) << endl;
```

is ____.

98

Correct. The expression `tolower('B')` evaluates to 'b', and the expression `static_cast<int>('b')` evaluates to 98. Therefore, the output of the `cout` statement is: 98

96

67

65

Question 22

2.5 / 2.5 pts

A function _____ is a function that is not fully coded.

code

example

shortcut

stub

Question 23**2.5 / 2.5 pts**

Given the following function prototype:

```
int myFunc(int, int);
```

which of the following statements is valid? Assume that all variables are properly declared.

- `cin >> myFunc(y);`
- `cout << myFunc(myFunc(7, 8), 15);`

Correct. This statement is valid.

- `cin >> myFunc("2", "3");`
- `cout << myFunc(myFunc(7), 15);`

Question 24**2.5 / 2.5 pts**

Which of the following function prototypes is valid?

- `int funcTest(int, int y, float z)`
- `funcTest(int x, int y, float) {};`
- `int funcTest(int x, int y, float z) {}`
- `int funcTest(int, int, float);`

Correct. This is a valid function prototype. A valid function prototype must contain function data type, name of the function, the parameter list, and it should be ended with a semicolon.

Incorrect

Question 25

0 / 2.5 pts

Given the function prototype:

```
float test(int, int, int);
```

which of the following statements is legal?

cout << test(7, test(14, 23));

cout << test(test(7, 14), 23);

Incorrect. This statement is invalid. The function `test` has three formal parameters of type `int`. The function call `test(7, 14)` is invalid because this function call has only two actual parameters. Note that the function call `test(test(7, 14), 23)` also has only two actual parameters.

cout << test(7, 14, 23);

cout << test(14, 23);

Question 26

2.5 / 2.5 pts

To use the predefined function `tolower`, the program must include the header file _____.

<cmath> <cctype>

Correct. The predefined function `tolower()` is defined in the standard header file `cctype`.

 <iostream> <cstdlib>**Question 27****2.5 / 2.5 pts**

The _____ of a function consists of the function name and its formal parameter list.

 signature call reference identifier**Question 28****2.5 / 2.5 pts**

Which of the following function prototypes is valid?

 funcExp (void) ;

- funcExp(int x, float v) {};
- int funcExp(x);
- int funcExp(int x, float v);

Correct. This is a valid function prototype. A valid function prototype must contain function data type, name of the function, the parameter list, and it should be ended with a semicolon.

Question 29

2.5 / 2.5 pts

Given the following function:

```
int strange(int x, int y)
{
    if (x > y)
    {
        return x + y;
    }
    else
    {
        return x - y;
    }
}
```

what is the output of the following statement?

```
cout << strange(4, 5) << endl;
```

- 1

Correct. In the function call `strange(4, 5)`, the value of `x` is 4 and the value of `y` is 5. Therefore, the expression `x < y` fails and the `else` part executes, which returns `x - y`, that is, the value -1.

9

20

1

Question 30

2.5 / 2.5 pts

The following function heading in a C++ program is valid:

```
int funcExp(int u, char v, float g)
```

False

True

The valid function heading is `returnType
FunctionName(Formal parameter list)`.

Question 31

2.5 / 2.5 pts

If the formal parameter list of a function is empty, the parentheses after the function name are not needed.

True

False

If the function's parameter list is empty, the parentheses are still required after the function name.

Question 32

2.5 / 2.5 pts

When you attach & after the dataType in the formal parameter list of a function, the variable following that dataType becomes a(n) _____ parameter.

reference

value

Question 33

2.5 / 2.5 pts

Given the following function prototype:

`double tryMe(double, double);`

which of the following statements is valid? Assume that all variables are properly declared.

`cout << tryMe(2.0, 3.0);`

Correct. This statement is valid. The function call `tryMe(2.0, 3.0)` has two actual parameters and they match with their corresponding formal parameters type.

`cout << tryMe(tryMe(float, float), float);`

- `cin >> tryMe(x);`
- `cout << tryMe(tryMe(double, double), double);`

Question 34**2.5 / 2.5 pts**

Functions that do not have a return type are called ____ functions.

- `void`
- zero
- empty
- null

Correct. A function that does not have a return type is called a `void` function.

Question 35**2.5 / 2.5 pts**

The data type of a variable in a `return` statement must match the function type.

- False
- True

The data type of the value that variable or expression computes must match the function type.

Question 36**2.5 / 2.5 pts**

Stream variables (for example, ifstream and ofstream) should be passed by _____ to a function.

- value
- reference

Question 37**2.5 / 2.5 pts**

Once you write and properly debug a function, you can use it in the program (or different programs) again and again without having to rewrite the same code repeatedly.

- False
- True

Once programmers write and debug a function appropriately, they can employ the function in the same program or different programs repeatedly without rewriting the function again.

Question 38**2.5 / 2.5 pts**

The function main is always compiled first, regardless of where in the program the function main is placed.

- False

When the `main` function is placed in the middle or at the end of the program, all function definitions appearing before the function `main` are compiled before the function `main`.

- True

Question 39

2.5 / 2.5 pts

If a function needs to return more than one value, as a rule of good programming style, you should change it to a(n) _____ function and use the appropriate reference parameters to return the values.

- int
- char
- void
- double

Question 40

2.5 / 2.5 pts

Given the following function:

```
int next(int x)
{
    return (x + 1);
}
```

what is the output of the following statement?

```
cout << next(next(5)) << endl;
```

7

Correct. The value returned by the function next is one more than the value of its formal parameter. Therefore, `next(next(5)) = next(6) = 7`. So the output of the cout statement is: 7

5

6

8

Quiz Score: **97.5** out of 100