Chapter 5 - Exercise questions

Started: Nov 29 at 11:02am

Quiz Instructions

I have created the Chapter 5 Exercise questions in Quiz format for you.

1. **These are given in Quiz format, meaning you will have to answer the questions in the format asked for; i.e. fill in the blank, multiple choice, essay (essay questions just allow for multiple answers, you do not have to write an essay).**
2. **These are all the even numbered questions.**
3. **Some are broken down further by the letters for the question.**
4. **They are variable in the number of points they count based on the number of items in the answers.**
5. **Please answer ALL of the following exercise questions for Chapter 5.**

This assignment will be due on 12/6/2017, by 11:59 pm, and will remain available until 12/8/1017 at 11:59 pm. If it is submitted after the due date there is a 20% deduction.

There will be two attempts given with the highest grade being kept, there is no time limit for either attempt, and you can see the correct answers after the final attempt.

Question 1 — 1.49 pts

Is the function heading listed here valid? If they are invalid, explain why.

one (int a, int b)

no, there is not a function type

Question 2 — 1.49 pts

Is the function heading listed here valid? If they are invalid, explain why.

int thisone(char x)

no, the function type is int so the

Question 3 — 1.49 pts

Is the function heading listed here valid? If they are invalid, explain why.

char another(int a, b)

no, the function type is char so th

Question 4 — 1.49 pts

Is the function heading listed here valid? If they are invalid, explain why.

double yetanother

no, there needs to be a parameter

Question 5 — 1.49 pts

What is the output of the following program segment?

a. **x = 10;**

cout << secret(x) << endl;

When answering 4. a. - d. consider the following functions.

```
int secret(int x)
{
    int i, j;
    i = 2 * x;

    if (i > 10)
       j = x / 2;
```

```
    else
        j = x / 3;

    return j - 1;
}

int another(int a, int b)
{
    int i, j;
    j = 0;
for (i = a; i <= b; i++)
    j = j + 1;
return j;
}
```

4

Question 6

1.49 pts

What is the output of the following program segment?

b. **x = 5; y = 8**

```
cout << another(x, y) << endl;
```

When answering 4. a. - d. consider the following functions.

```
int secret(int x)
{
    int i, j;
    i = 2 * x;

    if (i > 10)
        j = x / 2;
    else
        j = x / 3;

    return j - 1;
}
```

```
int another(int a, int b)
{
    int i, j;
    j = 0;
for (i = a; i <= b; i++)
    j = j + 1;
return j;
}
```

4

Question 7

1.49 pts

What is the output of the following program segment?

c. **x = 10; k = secret(x)**

cout << x << " " << k << " " << another(x, y) << endl;

When answering 4. a. - d. consider the following functions.

```
int secret(int x)
{
    int i, j;
    i = 2 * x;

    if (i > 10)
       j = x / 2;
    else
       j = x / 3;

    return j - 1;
}

int another(int a, int b)
{
    int i, j;
    j = 0;
for (i = a; i <= b; i++)
    j = j + 1;
```

```
return j;
}
```

- (●) 10 4 0
- ( ) 9 3 1
- ( ) 4 0 10
- ( ) 20 2 3

Question 8

1.49 pts

What is the output of the following program segment?

d. **x = 5; y = 8;**

cout << another(y, x) << endl;

When answering 4. a. - d. consider the following functions.

```
int secret(int x)
{
    int i, j;
    i = 2 * x;

    if (i > 10)
       j = x / 2;
    else
       j = x / 3;

    return j - 1;
}

int another(int a, int b)
{
    int i, j;
    j = 0;
for (i = a; i <= b; i++)
    j = j + 1;
```

```
return j;
}
```

0

Question 9 1.49 pts

Consider the following function:

```
int mystery(int x, double y, char ch)
{
    int u;
    if ('A' <= ch && ch <= 'R')
        return(2 * x  + static_cast<int> (y));
    else
        return(static_cast<int>(2 * y) - x);
}
```

What is the output of the following C++ statement?

a. cout << mystery(5, 4.3, 'B') << endl;

14

Question 10 1.49 pts

Consider the following function:

```
int mystery(int x, double y, char ch)
{
    int u;
```

```
    if ('A' <= ch && ch <= 'R')
        return(2 * x  + static_cast<int> (y));
    else
        return(static_cast<int>(2 * y) - x);
}
```

What is the output of the following C++ statement?

b. cout << mystery(4, 9.7, 'v') << endl;

14

Question 11 1.49 pts

Consider the following function:

```
int mystery(int x, double y, char ch)
{
    int u;
    if ('A' <= ch && ch <= 'R')
        return(2 * x  + static_cast<int> (y));
    else
        return(static_cast<int>(2 * y) - x);
}
```

What is the output of the following C++ statement?

c. cout << 2 * mystery(6, 3.9, 'D') << endl;

- (●) 15
- ( ) 45
- ( ) 30
- ( ) 60

Question 12

14.93 pts

What is the output of the following C++ program? (hint: it will contain 10 numbers in the output along with spaces.)

```
#include <iostream>
#include<cmath>

using namespace std;

int main()
{
    for (int counter = 1; counter <= 100, counter++)
        if (pow(floor(sqrt(counter + 0.0)),2) == counter)
            cout << counter << " ";

    cout << endl;

    return 0;
}
```

1 4 9 16 25 36 49 64 81 100

Question 13

11.92 pts

Show the output of the following C++ program. (Hint: there are 8 output values.)

```
#include <iostream>

using namespace std;

bool strange(int);

int main()
{
```

```
    int num =  0;
    while (num <= 29)
    {
        if (strange(num))
            cout << "True" << endl;
        else
            cout << "False" << endl;
        num = num = 4;
    }
    return 0;
}
bool strange(int n)
{
    if (n % 2 == 0 && n % 3 == 0)
        return true;
    else
        return false;
}
```

Question 14

10.44 pts

For questions 12. a. - d. Identify the items given in the programming code that follows each item given.

(Hint: a. has seven parts to the answer.)

a. Function prototype, function heading, function body, and function definitions.

PROGRAMMING CODE BELOW

```
#include <iostream>                                          //Line 1
using namespace std;                                         //Line 2
int one;                                                     //Line 3
void hello(int&, double, char);                              //Line 4
int main()                                                   //Line 5
{                                                            //Line 6
    int x;                                                   //Line 7
    double y;                                                //Line 8
    char z;                                                  //Line 9
    .
    .
    .
    hello(x, y, z);                                          //Line 10
    .
    .
    .
    hello(x, y - 3.5, 'S');                                  //Line 11
    .
    .
    .
}                                                            //Line 12
void hello (int& first, double second, char ch)              //Line 13
{                                                            //Line 14
    int num;                                                 //Line 15
    double y;                                                //Line 16
    int u;                                                   //Line 17
    .
    .
```

.

} //Line 18

HTML Editor

12pt Paragraph

p

Question 15

7.46 pts

For questions 12. a. - d. Identify the items given in the programming code that follows each item given.

(Hint: b. has five parts to the answer.)

b. Function call statements, formal parameters, and actual parameters.

PROGRAMMING CODE BELOW

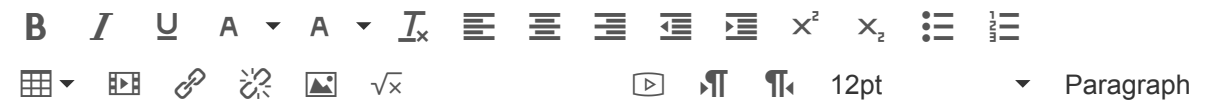
```
#include <iostream>
    //Line 1
```

```
using namespace std;
      //Line 2

int one;
      //Line 3

void hello(int&, double, char);
      //Line 4

int main()
      //Line 5
{
      //Line 6

   int x;
      //Line 7

   double y;
      //Line 8

   char z;
      //Line 9

   .

   .

   .

   hello(x, y, z);
   //Line 10

   .

   .

   .

   hello(x, y - 3.5, 'S');
    //Line 11

   .

   .

   .

}
   //Line 12
```

```
void hello (int& first, double second, char ch)
   //Line 13

{
  //Line 14

   int num;
  //Line 15

   double y;
  //Line 16

   int u;
 //Line 17

   .

   .

   .

}
  //Line 18
```

(https://coastalalabama.instructure.com/courses/1289/quizzes/27950/edit#)

HTML Editor



p

Question 16

2.99 pts

For questions 12. a. - d. Identify the items given in the programming code that follows each item given.

(Hint: c. has two parts to the answer.)

c. Value parameters, and reference parameters.

PROGRAMMING CODE BELOW

```
#include <iostream>                                    //Line 1
using namespace std;                                   //Line 2
int one;                                               //Line 3
void hello(int&, double, char);                        //Line 4
int main()                                             //Line 5
{                                                      //Line 6
    int x;                                             //Line 7
    double y;                                          //Line 8
    char z;                                            //Line 9
    .
    .
    .
    hello(x, y, z);                                    //Line 10
    .
    .
    .
    hello(x, y - 3.5, 'S');                            //Line 11
    .
    .
```

```
    .
}                                                    //Line 12
void hello (int& first, double second, char ch)      //Line 13
{                                                    //Line 14
    int num;                                         //Line 15
    double y;                                        //Line 16
    int u;                                           //Line 17
    .
    .
    .
}                                                    //Line 18
```

HTML Editor

12pt Paragraph

p

Question 17

4.48 pts

For questions 12. a. - d. Identify the items given in the programming code that follows each item given.

(Hint: d. has three parts to the answer.)

d. Local variables and global variables.

PROGRAMMING CODE BELOW

```
#include <iostream>                                    //Line 1
using namespace std;                                   //Line 2
int one;                                               //Line 3
void hello(int&, double, char);                        //Line 4
int main()                                             //Line 5
{                                                      //Line 6
    int x;                                             //Line 7
    double y;                                          //Line 8
    char z;                                            //Line 9
    .
    .
    .
    hello(x, y, z);                                    //Line 10
    .
    .
    .
    hello(x, y - 3.5, 'S');                            //Line 11
    .
    .
    .
}                                                      //Line 12
void hello (int& first, double second, char ch)        //Line 13
{                                                      //Line 14
```

```
    int num;                                    //Line 15
    double y;                                   //Line 16
    int u;                                      //Line 17
    .
    .
    .
}                                               //Line 18
```

HTML Editor

p

Question 18

1.49 pts

What is the difference between a local variable and a global variable?

- A variable declared within a function or block is called a local variable. A variable declared outside of every function definition is called a global variable.
- A variable declared within a function or block is called a global variable. A variable declared outside of every function definition is called a local variable.

- A variable for which memory is allocated at block entry and deallocated at block exit is a global variable. A variable for which memory remains allocated as long as the program executes is a local variable.
- A variable for which memory is allocated at block entry and deallocated at block exit is a local variable. A variable for which memory remains allocated as long as the program executes is a global variable.

Question 19

11.92 pts

What is the output of the following C++ program. (Hint: 6. has 8 lines of output that may or may not contain multiple values. 8 parts to the answer.)

```
#include <iostream>
#include<iomanip>

using namespace std;
void test(int first, int& second);
int main()
{
    int num;
    num = 5;
    test(24, num);
    cout << num << endl;
    test(num, num);
    cout << num << endl;
    test(num * num, num);
    cout << num << endl;
    test(num + num, num);
    cout << num << endl;
   return 0;
```

```
}
void test(int first, int& second)
{
    int third;
    third = first + second * second + 2;
    first = second - first;
    second = 2 * second;
    cout << first << "   " << second << "  "
         << third << endl;
}
```

HTML Editor

12pt Paragraph

p

Question 20

2.99 pts

What is the output of the following C++ program. (Hint: 8. has 2 lines of output that will contain multiple values. 2 parts to the answer.)

```
#include <iostream>
using namespace std;
int x;
void mickey(int&, int);
void minnie(int, int&);
int main()
{
    int first;
    int second = 5;
    x = 6;
    mickey(first, second);
    cout << first << "  " << second << "  " << x << endl;
    minnie(first, second);
    return 0;
}
void mickey(int& a, int b)
{
     int first;
     first = b + 12;
     a = 2 * b;
     b =  first + 4;
 }
void minnie(int u, int& v)
{
     int second;
     second = x;
     v = second + 4;
```

```
    x=  u + v;
}
```

HTML Editor

12pt Paragraph

p

Question 21

7.46 pts

Consider the following program. What is its exact output? Show the values of the variables after each line executes, as in Example 5-11. (refer to question 20 on page 329, as seen below)

(Hint: 20. has 5 lines of output with multiple values. 5 parts to the answer.)

```
#include <iostream>                          //Line 1

using namespace std;                         //Line 2
void funOne(int& a);                         //Line 3

int main()                                   //Line 4
{                                            //Line 5
    int num1, num2;
    num1 = 10;                               //Line 6
    num2 = 20;                               //Line 7
```

```
    cout << "Line 8: In main: num1 = " << num1
         << ", num2 = " << num2 << endl;          //Line 8

    funOne(num1);                                 //Line 9

cout << "Line 10: In main after funOne: num1 = "
     << num1 << ", num2 = " << num2 << endl;      //Line 10


return 0;                                         //Line 11
}                                                 //Line 12

void funOne(int& a)                               //Line 13
{
    int x = 12;                                   //Line 14
    int z;                                        //Line 15

    z = a + x;                                    //Line 16

    cout << "Line 17: In funOne: a = " << a
         << ", x = " << x
         << ", and z = " << z << endl;            //Line 17

    x = x + 5;                                    //Line 18

    cout << "Line 19: In funOne: a = " << a
         << ", x = " << x
         << ", and z = " << z << endl;            //Line 19

    a = a + 8;                                    //Line 20

    cout << "Line 21: In funOne: a = " << a
         << ", x = " << x
         << ", and z = " << z << endl;            //Line 21
}                                                 //Line 22
```

HTML Editor

B I U A A 12pt Paragraph

p

Question 22

1.49 pts

What is function overloading?

- Function overloading means giving the function more than it can handle.
- Function overloading means creating several functions with the same name.
- Function overloading means overwhelming the function with too many variables.
- Function overloading means disabling a function.

Question 23

1.49 pts

What is the signature of a function?

- The signature of a function is just another name for the body of a function.
- The signature of a function consists of comments describing what the function is for.
- The signature of a function consists of the function name and its formal parameter list.

- The signature of a function is the last value assigned in a function.

Question 24

1.49 pts

What is the output of the following function call, considering the function definition that follows it.

a. defaultParam(6);

FUNCTION DEFINITION BELOW

```
void defaultParam(int u, int v = 5, double z = 3.2)
{
    int a;
    u = u + static_cast<int>(2 * v + z);
    a = u + v * z;
    cout << "a = " << a << endl;
}
```

- a = 29
- a = 23
- a = 19
- a = 35

Question 25

1.49 pts

What is the output of the following function call, considering the function definition that follows it.

b. defaultParam(3, 4);

FUNCTION DEFINITION BELOW

```
void defaultParam(int u, int v = 5, double z = 3.2)
{
    int a;
    u = u + static_cast<int>(2 * v + z);
    a = u + v * z;
    cout << "a = " << a << endl;
}
```

- a = 26
- a = 14
- a = 32
- a = 20

Question 26

1.49 pts

What is the output of the following function call, considering the function definition that follows it.

c. defaultParam(3, 0, 2.8);

FUNCTION DEFINITION BELOW

```
void defaultParam(int u, int v = 5, double z = 3.2)
{
    int a;
    u = u + static_cast<int>(2 * v + z);
    a = u + v * z;
    cout << "a = " << a << endl;
```

```
}
```

- a = 3
- a = 6
- a = 5
- a = 10

No new data to save. Last checked at 12:16pm Submit Quiz