CS 210: Exam #2

Ray S. Babcock

November 9, 1991

Name: ______________________

Open book(s) and notes, 50 minutes. There are 25 multiple choice questions in this test. It is your responsibility to make sure that you have all of the questions. YOU MUST PUT YOUR ANSWERS ON THE ANSWER SHEET.

mcmxci

1. The most appropriate UML diagram that shows "what happens after what" in time would be:
   (a) a Sequence Diagram
   (b) a Use Case Diagram
   (c) a Class Diagram
   (d) a Domain Diagram
   (e) none of the above. (Put right answer in space on answer sheet.)

2. The most appropriate UML diagram that shows how the system functions when a database administrator runs it, would be:
   (a) a Sequence Diagram
   (b) a Use Case Diagram
   (c) a Class Diagram
   (d) a Domain Diagram
   (e) none of the above. (Put right answer in space on answer sheet.)

3. The most appropriate UML diagram that shows associations would be:
   (a) a Sequence Diagram
   (b) a Use Case Diagram
   (c) a Class Diagram
   (d) a Domain Diagram
   (e) none of the above. (Put right answer in space on answer sheet.)

4. The C++ statement that allows us to call `cout` instead of `std::cout` is:
   (a) `#include <iostream>`
   (b) `int usestd;`
   (c) `#include <vector>`
   (d) `using namespace std;`
   (e) None are correct. Put right answer in space on answer sheet.

5. The character backspace in a string literal is designated by:

   (a) `\n`
   (b) `\t`
   (c) `\b`
   (d) `\"`
   (e) None are correct. Put right answer in space on answer sheet.

6. Which of the following is **NOT** normally thought of as *whitespace* (would cause *isspace* to return false)?

   (a) a comma
   (b) an end of line character
   (c) a space
   (d) a tab
   (e) None are correct. Put right answer in space on answer sheet.

7. Given the following code segment,

```
string ray = "abc def";
string sally(ray.size(),'?');
```

   What would be output by the statement:

```
cout << ray + sally << endl;
```

   (a) `raysally`
   (b) `abc def`
   (c) `???????`
   (d) `abc def???????`
   (e) None are correct. Put right answer in space on answer sheet.

8. What would be output by:

```
cout << "A ";
cout << "cold ";
cout << "day!" << endl;
```

   (a) `Acold`
       `day!`
   (b) `A`
       `cold`
       `day!`
   (c) `A`
       `cold day!`
   (d) `A cold day!`
   (e) None are correct. Put right answer in space on answer sheet.

9. What is wrong with the following:

```
const string day = "Tuesday";
day = "Friday";
```

   (a) Nothing is wrong with those two statements.
   (b) You can't change a constant variable.
   (c) "Friday" is a different length string than "Tuesday".
   (d) A string variable cannot be made constant.
   (e) None are correct. Put right answer in space on answer sheet.

10. Given the following:

```
int a = 10;
int b = 12;
int c = 15;
int d = 20;
```

what is the value of:

```
(a == 12) || (b != 12) || (c < 8) || (d > 30)
```

(a) 12

(b) 15

(c) true

(d) false

(e) None are correct. Put right answer in space on answer sheet.

11. Given the following:

```
string one, two, three;
cin >> one;
cin >> two;
cin >> three;
```

and an input of:

```
myname is Suzie Smith
```

What would be stored in the variable `two`?

(a) is

(b) myname

(c) my

(d) nothing, the entire string would be in `one`.

(e) None are correct. Put right answer in space on answer sheet.

12. Given:

```
vector<int> fred;
```

and given that the vector `fred` contains `1 2 3 4 5` what would the container contain after the following statement?

```
fred.push_back(6);
```

(a) `1 2 3 4 5 6`

(b) `1 2 3 4 5`

(c) `6 1 2 3 4 5`

(d) `3 4 5 6 1 2`

(e) None are correct. Put right answer in space on answer sheet.

13. Given:

```
vector<double> julie;
double x;
while (cin >> x)
  julie.push_back(x);
```

And you enter:

```
1.1 3.3 2.2 4.4 6.6
```

what would be the value of `julie.size();`

(a) 2

(b) 4

(c) 6

(d) 8

(e) None are correct. Put right answer in space on answer sheet.

14. Given:

```
vector<int> stephen;
```

where `stephen` contains `9 7 5 3 1`
What would be the contents of `stephen` after the following statement:

```
sort(stephen.begin(), stephen.end());
```

(a) `1 2 3 5 7 9`
(b) `1 3 5 7 9`
(c) `1 5 9`
(d) `9 7 5 3 1 2`
(e) None are correct. Put right answer in space on answer sheet.

15. Given:

```
vector<int> blue;
```

where `blue` contains `1 0 4 2 7`
What would be the contents of `blue` after the following statement:

```
blue.clear();
```

(a) `0 0 0 0 0`
(b) nothing, it's now empty.
(c) 5 blanks.
(d) 5 nulls.
(e) None are correct. Put right answer in space on answer sheet.

16. Which of the following is the best description of a `const_iterator`?

(a) It cannot be moved within a container.
(b) It can be used to both read values from and write values to a container.
(c) It prevents writing (changing) values in a container.
(d) It prevents reading (accessing) values in a container.
(e) None are correct. Put right answer in space on answer sheet.

17. Given:

```
vector<int> gold;
vector<int>::const_iterator iter = gold.begin();
```

Assume `gold` contains `1 2 3 4 5` Also assume you have had the following executed:

```
++iter;
++iter;
```

What would be output by the following:

```
cout << *iter++ << endl;
```

(a) 3
(b) 2
(c) 1
(d) 4
(e) None are correct. Put right answer in space on answer sheet.

18. Given the following:

```
vector<int> ice;
```

and `ice` contains the values `10 14 -3 8 1 7`
What would `ice` contain after the following?

```
transform (ice.begin(), ice.end(),
               ice.begin(),
               negate<int>());
```

(a) `-10 -14 3 -8 -1 -7`
(b) `10 14 3 8 1 7`
(c) `-10 -14 -3 -8 -1 -7`
(d) `9 13 -4 7 0 6`
(e) None are correct. Put right answer in space on answer sheet.

19. Given an 8 element array `fred` of integers containing `2 5 3 9 7 8 1 4`
    What is in the range [fred[0],fred[5])?

    (a) `2 5 3 9 7 8 1 4`
    (b) `2 5 3 9 7 8`
    (c) `2 5 3 9 7`
    (d) `5 3 9 7 8 1`
    (e) None are correct. Put right answer in space on answer sheet.

20. Given the following:

```
vector<int> snow;
vector<int>::iterator white;
```

    and `snow` contains the values `1 2 3 1 2 3 4 5 6`
    What would be the values in the range [`snow.begin()`,`white`) **after** the following statement is executed?

```
white = remove(snow.begin(), snow.end(), 2);
```

    (a) `1 3 1 3 4 5 6 5 6`
    (b) `1 3 1 3 4 5 6`
    (c) `5 6`
    (d) `1 2 3 1 2 3 4 5 6`
    (e) None are correct. Put right answer in space on answer sheet.

Given the following:

```
#include <iostream>
void proc(int& a1, int a2)
{
 int local = 2;
 local = local + a2;
 a1++;
}
int main(void)
{
  int main1 = 10;
  int main2 = 4;
  proc(main1, main2);
  cout << main1 << endl; // OUTPUT ONE
  cout << main2 << endl; // OUTPUT TWO
}
```

21. What would print at the line marked OUTPUT ONE?

    (a) 10
    (b) 4
    (c) 11
    (d) 5
    (e) None are correct. Put right answer in space on answer sheet.

22. What would print at the line marked OUTPUT TWO?

    (a) 10
    (b) 4
    (c) 11
    (d) 5
    (e) None are correct. Put right answer in space on answer sheet.

23. Given the following:

```
vector<int> sidewalk;
```

Assume `sidewalk` contains `1 20 3 18 5 16 7 14 9 12`
What would `sidewalk` contain after calling `stable_partition` with a function that returns true if the element is less than 10?

(a) `1 20 3 18 5 16 7 14 9 12`
(b) `1 3 5 7 9 20 18 16 14 12`
(c) `1 3 5 7 9 12 14 16 18 20`
(d) `20 18 16 14 9 7 5 3 1 12`
(e) None are correct. Put right answer in space on answer sheet.

24. Given the following:

```
vector<int> computer;
```

where `computer` contains `2 4 6 8 10`
What would be the output of the following:

```
cout << accumulate (computer.begin(), computer.end(), 0) << endl;
```

(a) 3840
(b) 10
(c) 20
(d) 30
(e) None are correct. Put right answer in space on answer sheet.

25. Given the following:

```
list<int> mylist;
```

where `mylist` already contains `21 42 0 -9`
What would `mylist` contain after the following two statements:

```
front_inserter(mylist) = 19;
front_inserter(mylist) = 4;
```

(a) `19 4 21 42 0 -9`
(b) `4 19 21 42 0 -9`
(c) `21 42 0 -9 4 19`
(d) `21 42 0 -9 19 4`
(e) None are correct. Put right answer in space on answer sheet.