

The University of Alabama in Huntsville
Electrical and Computer Engineering
CPE 112 02
Example of Objective Test Questions for Test 4

Name: _____

True or False

1. _____ The statement

```
switch (n)
{
    case 8 : alpha++;
           break;
    case 3 : beta++;
           break;
    default : gamma++;
            break;
}
```

is equivalent to the following statement.

```
if (n == 8)
    alpha++;
else if (n == 3)
    beta++;
else
    gamma++;
```

2. _____ To avoid infinite loops, a Do-While statement's condition must be false at some time during its execution.
3. _____ A For loop is a posttest loop, whereas a While loop is a pretest loop.
4. _____ If a loop containing a `break` statement is nested within a Switch statement, execution of that `break` statement causes an exit from the loop but not from the Switch statement.
5. _____ The C++ statement

```
alpha /= beta + 25;
```

is equivalent to the statement

```
alpha = alpha / (beta + 25);
```

6. _____ Because of representational error, two integers should not be compared for exact equality.
7. _____ In the data type defined by

```
enum Colors {RED, GREEN, BLUE};
```

the enumerators are ordered such that `RED > GREEN > BLUE`.

8. _____ The declaration

```
enum GradeType {'A', 'B', 'C', 'D', 'F'};
```

results in a compile-time error.

9. _____ A `struct` is a homogeneous structured data type.

10. _____ To select a member of a `struct`, you specify the member name, then a dot, and then the `struct` variable name.

11. C++ allows a `struct` to be a member of another `struct`.

12. C++ operators that may be applied to `struct` variables are assignment (`=`), equality testing (`==`), and member selection (`.`).

Fill in the Blank

13. In C++, the _____ statement is the special control structure designed for multi-way branches.

14. When used for a count-controlled loop, the C++ _____ statement is the looping structure that collects into one location the initialization, testing, and incrementation of the loop control variable.

15. A _____ loop is the general name given to a loop in which the loop test is positioned after the loop body.

16. Data types in which each value is atomic (indivisible) are known as _____ types.

17. _____ is the conversion of a value from a "lower" type to a "higher" type according to a programming language's precedence of data types.

18. A(n) _____ is a user-defined data type whose domain is an ordered set of literal values expressed as identifiers.

19. A record in which at least one of the components is itself a record is called a(n) _____ record.

20. A record (struct) is said to be a(n) _____ data type because its components can be of different data types.

Multiple Choice

21. _____ Which of the following is *not* a C++ looping control structure?

- a. While
- b. For
- c. Do-While
- d. Switch

22. _____ What is the output of the following code fragment if the input value is 4? (Be careful here.)

```
int num;
int alpha = 10;

cin >> num;
switch (num)
{
    case 3 : alpha++;
    case 4 : alpha = alpha + 2;
    case 8 : alpha = alpha + 3;
    default : alpha = alpha + 4;
}
cout << alpha << endl;
```

- a. 10
- b. 14
- c. 12
- d. 19
- e. 15

23. _____ To produce the output 2 4 6 8 10, what is the loop condition for the following loop?

```
n = 0;
do
{
    n = n + 2;
    cout << n << ' ';
} while ( ??? );
```

- a. n <= 10
- b. n < 10
- c. n < 8
- d. n >= 2
- e. n > 8

24. _____ Which For loop is equivalent to the following While loop? (All variables are of type int.)

```
count = -5;
while (count <= 15)
{
    sum = sum + count;
    count++;
}
```

- a. for (count = -5; count <= 15; count++)
sum = sum + count;
- b. for (count = -5; count <= 15; count++)
{
sum = sum + count;
count++;
}
- c. for (count = -5; count <= 15; count++)
{
count++;
sum = sum + count;
}
- d. for (count = 1; count <= 21; count++)
sum = sum + count;

25. _____ Given the declarations

```
enum MovieRatings {G, PG, PG13, R, X};
MovieRatings thisOne;
```

and assuming that thisOne currently contains a value less than X, which of the following statements can be used to "increment" thisOne?

- a. thisOne = thisOne + 1;
- b. thisOne++;
- c. MovieRatings(thisOne++);
- d. thisOne = MovieRatings(thisOne + 1);
- e. thisOne = MovieRatings(thisOne) + 1;

26. _____ You have created some useful type declarations and constant declarations and have stored them into a file named mystuff.h. Which of the following would you use to insert the contents of this file into a program?

- a. #include <mystuff.h>
- b. #include "mystuff.h"
- c. #include mystuff.h
- d. #insert mystuff.h

27. _____ A struct is an example of:

- a. a simple data type
- b. a homogeneous structured type

- c. a heterogeneous structured type
- d. an enumeration type

28. _____ In C++, which of the following is *not* allowed as an aggregate operation on structs?

- a. assignment
- b. I/O
- c. parameter passage by value
- d. parameter passage by reference
- e. return as a function's return value

29. _____ Given the declarations

```
typedef char String19[20];
struct BrandInfo
{
    String19 company;
    String19 model;
};
struct DiskType
{
    BrandInfo brand;
    float    capacity;
};
DiskType myDisk;
```

which of the following assignment statements is valid?

- a. `myDisk.capacity = 1.44;`
- b. `myDisk.BrandInfo = "Memorex";`
- c. `strcpy(myDisk.BrandInfo, "Memorex");`
- d. a and c above
- e. none of the above