

## 21. True or False

- a) Void functions return a value
- b) Function prototypes do not require parameter names.
- c) Pass by reference will send the address of the variable, not the value of the variable.

## 22. What is printed?

```
void Func(int& x, int y) {
    x = 52;
    y = 7;
    return;
}

int main () {
    int x = 0;
    int y = 0;
    Func(x, y);
    cout << "x = " << x << endl;
    cout << "y = " << y << endl;
    return 0;
}
```

## 23. What is printed?

```
int Func(double& a, double& b, double c) {
    a = 2 * b;
    b = 15 + c;
    c = 3 * a;
    return (a + b + c);
}

int main () {
    double a = 1;
    double b = 2;
    double c = 3;
    Func(a, b, c);
    cout << "a = " << a << " b = " << b;
    cout << " c = " << c << endl;
    return 0;
}
```

## 24. What is printed?

```
int Func(double& a, double& b, double c) {
    a = 2 * b;
    b = 15 + c;
    c = 3 * a;
    return (a + b + c);
}

int main () {
    double a = 1;
    double b = 2;
    double c = 3;
    double d;
    d = Func(a, b, c);
    cout << "d = " << d << endl;
    return 0;
}
```

## 25. Which are legal stmts?

```
void MyFuncA(int x, int y, int z);  
int MyFuncB(int x, double y);
```

- a) `cout << MyFuncA(5, 4, 6) << endl;`
- b) `cout << MyFuncB(5, 4.0) << endl;`
- c) `MyFuncA(5, 4);`
- d) `MyFuncA(5, 4.7, 3);`
- e) `int x = MyFuncB(5, 6);`

## 27. Write Function

Write a function that calculates and returns the area of a square for whole numbers.

## 26. Write Func Prototypes

- a. Write a function prototype with the name “MyFunction”, no parameters, and does not return a value.
- b. Write a function prototype with the name “MyFunction”, no parameters, and returns a double.
- c. Write a function prototype with the name “MyFunction”, that returns an integer and whose parameters are (in this order): an integer named foo, a double named bar, and a character named foobar.

## 28. Find the errors

```
#include <iostream>  
using namespace std;  
  
int main () {  
    short 7;  
    addOne(x);  
    cout >> "7 plus one is " << << x << endl;  
}  
  
void addOne(int x) {  
    x++;  
}
```

## 29. Write Structure

a. Write a structure definition for a structure called Student that holds the following data about a student:

- ID (int)
- entry year (int)
- GPA (double)

b. Declare a variable called student5 and use assignment statements to initialize its values to:

- ID = 1234
- entry year = 2014
- GPA = 3.41

## 30. Write Structure

a. Write a structure definition for a structure called Advisee that holds the following data about an advisee:

- name (string)
- student (Student)

b. Declare a variable called advisee7 and use assignment statements to initialize its values to:

- name = "Mary Jean"
- ID = 1234
- entry year = 2014
- GPA = 3.41

## 31. Write Function

Write a function called NewAdvisee that has no return and takes two parameters: Student (s) and Advisee (a). Both parameters are passed by reference, such that Student is not allowed to be changed. The goal of the function is to modify Advisee by:

- adding a name (a name entered by the user)
- setting the Advisee student variable to be the Student argument passed to the function

## 32. String Functions

```
string s = "stop rolling";
```

a. Write a command that prints how many characters are in string s.

b. Write a command to add "sc" before "rolling".

c. Write a command to change the blank space in s to be 'X'.

d. Write a command to print the 'r' character in s.