



Philadelphia University
Faculty of Engineering

Marking Scheme

Examination Paper

Department of CE

Module: Programming Language (630203)

Second Exam

Second Semester

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Section 1

Weighting 15% of the module total

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Marking Scheme Programming Language (630203)

The presented exam questions are organized to overcome course material, the exam contains 3 questions; *all questions* are compulsory requested to be answered. Thus, the student is permitted to answer any question out of the existing ones in this section.

Marking Assignments

The following scheme shows the marks assignments for each question. They show also the steps for which a student can get marks along the related procedure he/she achieves.

Question 1 This question is attributed with 6 marks if answered properly

The answer for this question as the following:

- A variable listed in a function call is known as a(n) ____ parameter. A variable list in a header is known as a(n) ____ parameter.
a. actual; actual
b. formal; formal
c. actual; formal
d. formal; actual
- If an & is attached after the data type of a formal parameter, then the formal parameter is a ____.
a. value parameter
b. reference parameter
c. global variable
d. default variable
- What value is returned by the following return statement?

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


a. 0
b. 5
c. 6
d. 7

- 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;
```

a. -1
b. 1
c. 9
d. 20

- Given the function prototype:

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

which of the following statements is legal?

- cout << test(7, test(14, 23));
b. cout << test(test(7, 14), 23);
c. cout << test(14, 23);
d. cout << test(7, 14, 23);
- Which of the following is a legal C++ function definition?
a.

```
void funcTest(int& u, double& v)  
{  
    cout << u << " " << v << endl;  
}
```


b.

```
void funcTest(int& u, double& v);  
{  
    cout << u << " " << v << endl;  
}
```


c.

```
void funcTest(int& u, double& v)  
(  
    cout << u << " " << v << endl  
)
```


d.

```
void funcTest(int& u, double& v)  
[  
    cout << u << " " << v << endl;  
]
```

Question 2 This question is attributed with 3 marks if answered properly
The answer for this question as the following:

```
Program Start.
x = 1
y = 2
z = 13
4
3
Program End.
Press any key to continue
```

Question 3 This question is attributed with 6 marks, if answered properly.
The complete code for this question as the following:

```
#include <iostream>
#include <cmath>
#include <iomanip>
using namespace std;
double findMean(double x1, double x2, double x3, double x4, double x5);
double findStdDev(double x1, double x2, double x3, double x4, double x5);
int main()
{
    double x1, x2, x3, x4, x5;
    cout << fixed << showpoint << setprecision(2);
    cout << "Enter five numbers: ";
    cin >> x1 >> x2 >> x3 >> x4 >> x5;
    cout << endl;
    cout << "The mean of the numbers is: "
         << findMean(x1, x2, x3, x4, x5) << endl;
    cout << "The standard dseviation of the numbers is: "
         << findStdDev(x1, x2, x3, x4, x5) << endl;
    return 0;
}
double findMean(double x1, double x2, double x3, double x4, double x5)
{
    return (x1 + x2 + x3 + x4 + x5) / 5.0;
}
double findStdDev(double x1, double x2, double x3, double x4, double x5)
{
    double mean = findMean(x1, x2, x3, x4, x5);
    double stdDev;
    stdDev = sqrt((pow(x1 - mean, 2) + pow(x2 - mean, 2) +
                  pow(x3 - mean, 2) + pow(x4 - mean, 2) +
                  pow(x5 - mean, 2)) / 5.0);
    return stdDev;
}
```

(2 marks)

(2 marks)

(2 marks)