LAB EXERCISE 3

TOPIC: FUNCTIONS

NAME:
MATRIC NO:
SECTION:

QUESTION 1

Describe the difference between predefined function and programmer-defined function?

QUESTION 2

Write a statement to calculate the equation or to convert the statement below using function from library.

a) Square root of y.
b) x to the power of y.
c) cos x.
d) Change character to uppercase.
e) Copy the string of x into string y.

QUESTION 3

What is the difference between local variable, global variable, global constant and static local variable?

QUESTION 4

Given the following coding, fill in the blank with the "terms" of function as a comment.

```
#include <iostream>
using namespace std;
int average(int, int, int); ____________________________
int main()
{
      int x, y, z, avrg;
      cout << "Please enter three numbers:" << endl;
      cin >> x >> y >> z;
      avrg = average (x, y, z); ____________________
      cout << "The average of the given three numbers is: " <<
     avrg << endl;
      return 0;
}
int average(int a, int b, int c) ____________________
{
      int sum, avrg2;
      sum = a + b + c;
      avrg2 = sum / 3;
      return avrg2; _________________
}
```

QUESTION 5

Find the errors in the following given code.

```
#include <iostream>
using namespace std;
int average(int, int);
int power (float p);
int main()
{
 int x, y, z, avrg, powerOf;
 cout << "Please enter three numbers:" << endl;
 cin >> x >> y >> z;
 avrg = average ();
 cout << "The average of the given three numbers is: " << avrg <<
endl;
 power ();
 cout << "The average number to the power of two is: " << power ()
<< endl;
return 0;
}
int average(int a, int b, int c)
{
 int sum, avrg2;
 sum = a + b + c;
 avrg2 = sum / 3;
}
int power (int p)
{
 int pOf;
 pOf = pow(p,2);
 return 0;
}
```

QUESTION 6

Write a C++ program to calculate a rectangle's area. The program consists of the following function:

- `getLength` – This function should ask the user to enter the rectangle's length, and then returns that value as a double
- `getWidth` – This function should ask the user to enter the rectangle's width, and then returns that value as a double.
- `getArea` – This function should accept the rectangle's length and width as arguments and return the rectangle's area.
- `displayData` – This function should accept the rectangle's length, width and area as arguments, and display them in an appropriate message on the screen.
- `main` – This function consists of calls to the above functions.

For Question 6, provide the answer in .cpp file.