king Saud University
College of Computer and
Information Sciences
Computer science department

Student Name:

Answer Sheet
(Dr Borhen)

Student ID:

Midterm 2 Spring 2017

Cs201-Programming in C++

20 Marks

A. Multiple Choice(5 Marks)

1. #include <iostream>
using namespace std;

int main()
{
 int i,j=5;
  i=j++;
 cout<<i;
}
  [A] 6
  [B] 5
  [C] 4
  [D] 7

Answer: 5

2. What is the output of the following Program?
#include <iostream>
#include<cmath>
using namespace std;
int main()
{
 int x=5,y;

  y=sqrt(x);
  cout<<y;
}
  [A] 2.5
  [B] 5
  [C] 2
  [D] No Answer

Answer: 2

3. What are mandatory parts in function declaration?
  [A] return type,function name
  [B] return type,function name,parameters
  [C] both a and b
  [D]none of the mentioned

Answer: A

4. Where does the execution of the program starts?
  [A] user-defined function
  [B] main function
  [C] void function
  [D] none of the mentioned

Answer: B

5. What is the output of the following code?
// Example program
#include <iostream>
using namespace std;

int main()
{
 int i,j=5;
  i=j++;
 cout<<j<<" "<<i;
}
[A] 5 5 [B] 5 6 [C] 6 5
[D] 6 6

Answer: 6 5

B. Answer the following Question (6 Marks)

Each Question carry's 2 Marks

1. Find any errors in the following function definition:

```
void myfunction(int x,int y)
{
 cout<<x*y;
 return(x*y);
}
```

Answer: void by int

2. Find any errors in the following function definition:

```
int myfunction(int x,y)
{
   return(x*y);
}
```

Answer: int y

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3. Find the error if any and give the line no and the correct answer.

```
1. //include <iostream>
2. using namespace std;
3. struct student
4. {
5. int studentid;
6. string studentname;
7. };
8. int main()
9. {
10. student stud;
11. cout<<"Enter student id :";
12. cin>>studentid;
13. cout<<"Enter student name :";
14. cin>>studentname;
15. cout<<"The student id is
    "<<stud.studentid<<"The student name
    is "<<stud.studentname;
16 }
```

Answer: replace 12/ cin>> stud.studentid;
14/ cin>> stud.studentname;

C. Questions (4 Marks)

1. Write a function read_integer of return type integer asking the user to input an integer and return the integer. Then, write a program that reads two integer using the function read_integer and prints them.

   Sample output:
   Enter the interger value: 45
   Enter the interger value: 25
   The integer value is number1 is 45
   The integer value of number 2 is 25

```
#include <iostream>
using namespace std;
int read_integer (int);
void print_integer (int,int);
int main( )
{ int a, b, z, w ;
  z = read_integer(a);
  w = read_integer(b);
  print_integer(z,w);
  return 0;
}
int read_integer (int)
  { int a;
    cout << "Enta the integer value :";
    cin >> a;
    return a;
  }
void print_integer (int a, int b)
  {
    cout << "The integer value of number1 is
          << a << endl;
    cout << "The integer value of number2 is:"
          << b << endl;
  }
```

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(Marks 5)

2. Define the structure struct Point which contains two double variables, one for the x coordinate and one for the y. Write the following functions.
Read_point() : This function reads the two coordinates from the user and return an object.
Print_point() : This function prints the two coordinates to the screen.
Using these functions, write a program that reads the coordinates of the point and then prints the coordinates of that point.
Enter x= 1.5
Enter y = 3
(x , y) = (1 . 5 , 3)

```
#include <iostream>
using namespace std;
struct Point
  { double x;
    double y;
  };

Point Read_point( )
 { Point p;
   cout << "Enter x : ";
   cin >> p.x;
   Cout << "Enter y : ";
   cin >> p.y;
   return p;
 }

Point Print_point( )
 { Point p;
   Cout << "x =" << p.x << endl;
   Cout << "y=" << p.y << endl;
   return p;
 }
int main( )
 { Point p;
   p = Read_point( );
   p = Print_point( );
   return 0;
 }
```

Cout << "(x,y)=(" << p.x << "," << p.y << ")" << endl;