

Midterm 1 (Introduction to C++ Programming) – Fall 2018

Student Name:

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Enter the answers for Question 1 in the table below:

1.1	1.2	1.3	1.4	1.5
A	B	C	D	A

Question 1: (5 marks)

1.1 Find the output of the following code:

```
#include <iostream>
using namespace std;
int main()
{
    int x = 10;
    cout << -- x + 1 << ", ";
    cout << x++;
}
```

- a) 10, 9
- b) 10, 10
- c) 9, 10
- d) 9, 9

1.2 Find the output of the following code:

```
#include <iostream>
using namespace std;
int main()
{
    int grade = 100;

    if (grade > 60 && grade < 100)
        cout << "Pass";
    else
        cout << "Fail";
}
```

- a) Pass
- b) Fail
- c) Error
- d) Pass Fail

1.3 Find the output of the following code:

```
include <iostream>
using namespace std;
int main()
{
    int x = 1, y = 2;
    cout << x - y + 3 * 4 / 5;
}
```

- a) 3
- b) 2
- c) 1
- d) 0

1.4 Find the output of the following code:

```
#include <iostream>
using namespace std;
int main()
{
    int x = 1, y = 2;

    switch(y){
        case 1: cout << "one";
        case 2: cout << "two";
        default: cout << "three";
    }
}
```

- a) onetwo
- b) one
- c) onetwothree
- d) twothree

1.5 Find the output of the following code:

```
#include <iostream>
using namespace std;
int main()
{
    double a = 2.5;
    int b = 3;
    b = a;
    cout << b;
}
```

- a) 2
- b) 2.5
- c) Error
- d) 3

Question 2: (5 marks)

Make changes in the following program so that it uses a switch-case statement in place of the if-elseif-else statement:

```
#include <iostream>
using namespace std;
int main()
{
    int legs=0;

    cout << "Enter number of legs ";
    cin >> legs;

    if(legs == 1) cout << "Pirate";
    else if(legs == 2) cout << "Bird";
    else if(legs == 4) cout << "Cat";
    else if(legs == 6) cout << "Spider";
    else cout << "I don't know what you are";
}
```

Answer 2:

```
#include <iostream>
using namespace std;
int main()
{
    int legs;

    cout << "Enter number of legs ";
    cin >> legs;
    switch(legs)
    {
        case 1: cout<<"Pirate"; break;
        case 2: cout<<"Bird";break;
        case 4: cout<<"Cat";break;
        case 6: cout<<"Spider";break;
        default: cout<<"I don't know what you are?";
    }
    return 0;
}
```

Question 3: (5 marks)

Make changes in the following program so that it uses a while loop in place of the for loop:

```
#include <iostream>
using namespace std;
int main()
{
    int max;

    cout << "Enter max number";
    cin >> max;
    for(int i=max;i>=0;i--) cout << i << "\n";
}
```

Answer 3:

```
#include <iostream>
using namespace std;
int main()
{
    int i,max;

    cout << "Enter max number";
    cin >> max;
    i=max;
    while (i>=0)
    {
        cout<<i<<"\n";
        i--;
    }
    return 0;
}
```

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