

**ENG236 Computer Programming**  
**Quiz 6 (29 October 2009)**

Instructions: open book, 15 minutes

1. (96 marks) Consider the following C++ program. Write down the outputs of this program on the screen. You must provide a succinct explanation for each line of output.

```
**** Cat() ****      (BlackCat in main())
**** Cat() ****      (WhiteCat in func1())
**** Cat() ****      (BlackCat in func1())
**** Cat() ****      (BlackCat in func2())
**** Cat() ****      (WhiteCat in func2())
**** ~Cat() ****     (BlackCat in func2()) | The order is not important.
**** ~Cat() ****     (WhiteCat in func2()) |
**** ~Cat() ****     (WhiteCat in func1()) > The order is not important.
**** ~Cat() ****     (BlackCat in func1()) >
**** Cat() ****      (WhiteCat in main())
**** ~Cat() ****     (BlackCat in main()) < The order is not important.
**** ~Cat() ****     (WhiteCat in main()) <
```

```
#include <iostream>
using namespace std;

class Cat
{
public:
    Cat(); // Constructor of Cat
    ~Cat(); // Destructor of Cat
private:
};

void func1();
void func2();

int main()
{
    Cat BlackCat;
    func1();
    Cat WhiteCat;
    return 0;
}

Cat::Cat()
{
    cout<<"**** Cat() ****"<<endl;
}

Cat::~~Cat()
{
    cout<<"**** ~Cat() ****"<<endl;
}

void func1()
{
    Cat WhiteCat, BlackCat;
    func2();
}

void func2()
{
    Cat BlackCat;
    Cat WhiteCat;
}
```