1. 已有语句：

```
string s1("I have a dream");
string s2("Computer Programming");
```

假定下列各语句相互独立，试写出每个语句的结果 (P.326/400, 10.2)

```
(1) s1.append(s2)
(2) s1.append(s2, 9, 7)
(3) s1.append("NEW", 3)
(4) s1.append(3, 'N')
(5) s1.assign(3, 'N')
(6) s1.assign(s2, 9, 7)
(7) s1.assign("NEWNEW", 3)
(8) s1.assign(3, 'N')
(9) s1.at(0)
(10) s1.length()
(11) s1.size()
(12) s1.capacity()
(13) s1.erase(1, 2)
(14) s1.compare(s3)
(15) s1.compare(0, 10, s3)
(16) s1.c_str()
(17) s1.substr(4, 8)
(18) s1.substr(4)
(19) s1.find('A')
(20) s1.find('a', 9)
(21) s1.replace(2, 4, "NEW")
(22) s1.insert(4, "NEW")
(23) s1.insert(6, 8, 'N')
(24) s1.empty()
```

2. 已有语句：

```
string s1("I have a dream");
string s2("Computer Programming");
```

假定下列各表达式相互独立，试写出每个表达式的结果 (P.326/400, 10.4)

```
(1) s1[0]
(2) s1 = s2
(3) s1 = "C++ " + s2
(4) s2 += "C++ "
(5) s1 > s2
(6) s1 >= s2
(7) s1 < s2
(8) s1 <= s2
(9) s1 == s2
(10) s1 != s2
```

3. 怎样定义一个包含 10 个 string 对象的数组? (P.406, 10.13)

4. 给出下面代码的输出结果 (P.406, 10.14)

```
int main()
{
    string cities[] = {"Atlanta", "Dallas", "Savannah"};
    cout << cities[0] << endl;
    cout << cities[1] << endl;
    return 0;
}
```

5. 指出下面代码中的错误并修正 (P.375/456, 11.31)

```
// Construct a circle object
Circle::Circle(double radius)
{
    radius = radius;
}
```

6. 写出下面代码的输出结果 (P.378/458, 11.32)

```
#include <iostream>
using namespace std;
class Employee
{
  public:
    Employee(int id) { this->id = id; }
    ~Employee()
    {
        cout << "object with id " << id << " is destroyed" << endl;
    }
  private:
    int id;
};
int main()
{
    Employee* e1 = new Employee(1);
    Employee* e2 = new Employee(2);
    Employee* e3 = new Employee(3);
    delete e3;
    delete e2;
    delete e1;
    return 0;
}
```

7. 下面的类需要析构函数码？怎么定义？ (P.378/459, 11.34)

```
class Person
{
  public:
    Person()
    {
        numberOfChildren = 0;
        children = new string[20];
    }
    void addAChild(string name)
    {
        children[numberOfChildren++] = name;
    }
    string* getChildren()
    {
        return children;
    }
    int getNumberOfChildren()
    {
        return numberOfChildren;
    }

  private:
    string* children;
    int numberOfChildren;
};
```

8. 写出下面代码的输出结果 (P.384/465, 11.38)

```
#include <iostream>
#include <string>
using namespace std;
int main()
{
    string s1("ABC");
    string s2("DEFG");
    s1 = string(s2);
    cout << s1 << endl;
    cout << s2 << endl;
    return 0;
}
```

9. 上面代码中的“s1 = string(s2)”能写成“s1 = s2”吗？两者有何区别？哪个更好？(P.384/465, 11.39)